USER REQUIREMENTS IN CUSTOMER SERVICE

EUROPE

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Offices

NORTH AMERICA

Headquarters
1943 Landings Drive
Mountain View, CA 94043
(415) 960-3990
Telex 171407

New York
Parsippany Place Corp. Center
Suite 201
959 Route 46 East
Parsippany, NJ 07054
(201) 299-6999
Telex 134630

Washington, D.C.
11820 Parklawn Drive
Suite 201
Rockville, MD 20852
(301) 231-7350

EUROPE

United Kingdom
INPUT
41 Dover Street
London W1X 3RB
England
01-493-9335
Telex 27113

Italy
Nomos Sistema SRL
20127 Milano
Via Soperga 36
Italy
Milan 284-2850
Telex 321137

Sweden
Athena Konsult AB
Box 22232
S-104 22 Stockholm
Sweden
08-542025
Telex 17041

ASIA

Japan
ODS Corporation
Dai-ni Kuyo Bldg.
5-10-2, Minami-Aoyama
Minato-ku,
Tokyo 107
Japan
(03) 400-7090
Telex 26487

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USER REQUIREMENTS
IN CUSTOMER SERVICE
EUROPE

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USER REQUIREMENTS IN CUSTOMER SERVICE
EUROPE

ABSTRACT

As pressures on customer service profitability increase and competition intensifies, a clear understanding of user needs is essential.

INPUT's latest European report, <u>User Requirements in Customer Service--Europe,</u> focuses attention on the three areas uppermost in users' minds--reliability, system availability, and response times--as well as examining the relative importance of a number of other service elements such as guarantees, preventive maintenance, remote diagnostics, and the availability of on-site parts.

The report will enable customer service management to compare their performance in these key areas with industry standards.

This report contains 118 pages, including 94 exhibits.

USER REQUIREMENTS IN CUSTOMER SERVICE
EUROPE

CONTENTS

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USER REQUIREMENTS IN CUSTOMER SERVICE
EUROPE

EXHIBITS

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I INTRODUCTION

I INTRODUCTION

- In an increasingly competitive and valuable marketplace, clear understanding of user requirements is vital. Quality of service is the most important reason for users not to change their service supplier. From a defensive point of view, therefore, a knowledge of user needs followed by the development of a service product to meet those needs will fend off competitors. From an offensive point of view, such knowledge and the right product will enable a vendor to exploit market opportunities.

- This brief seeks to understand and explain user requirements in a number of key product areas--systems, peripherals and terminals, data communications, office equipment, and copiers. The analysis covers in depth the U.K., France, and Germany.

- Most of the statistical data was gathered during 1984. Users were asked to rate the importance to them of specified service elements by hardware product group.

- In addition, some 30 users were telephoned and asked about their service in a free format method to identify any other important requirements.

- In previous studies, INPUT had prompted the user to give importance ratings to a number of service factors. When so prompted, most users said that each individual factor had more than average importance (on a 1-10 scale, 5 = average), as can be seen from Exhibit I-1, which gives the summary position.

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EXHIBIT I-1

USER NEEDS (European Average)

Category	Rating
Equipment Reliability	9.3
System Availability	8.6
Response Time	8.5
Repair Time	8.5
Software Maintenance	7.3
Price	7.1
Guaranteed Up-time	6.5
Engineer Continuity	6.0
Preventive Maintenance	5.9
Choice of Service	5.6
Tele-Diagnostics	5.1

0   5   6   7   8   9   10

Rating: 1 = Unimportant, 10 = Vitally Important   Source: INPUT User Survey

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FAE4 F
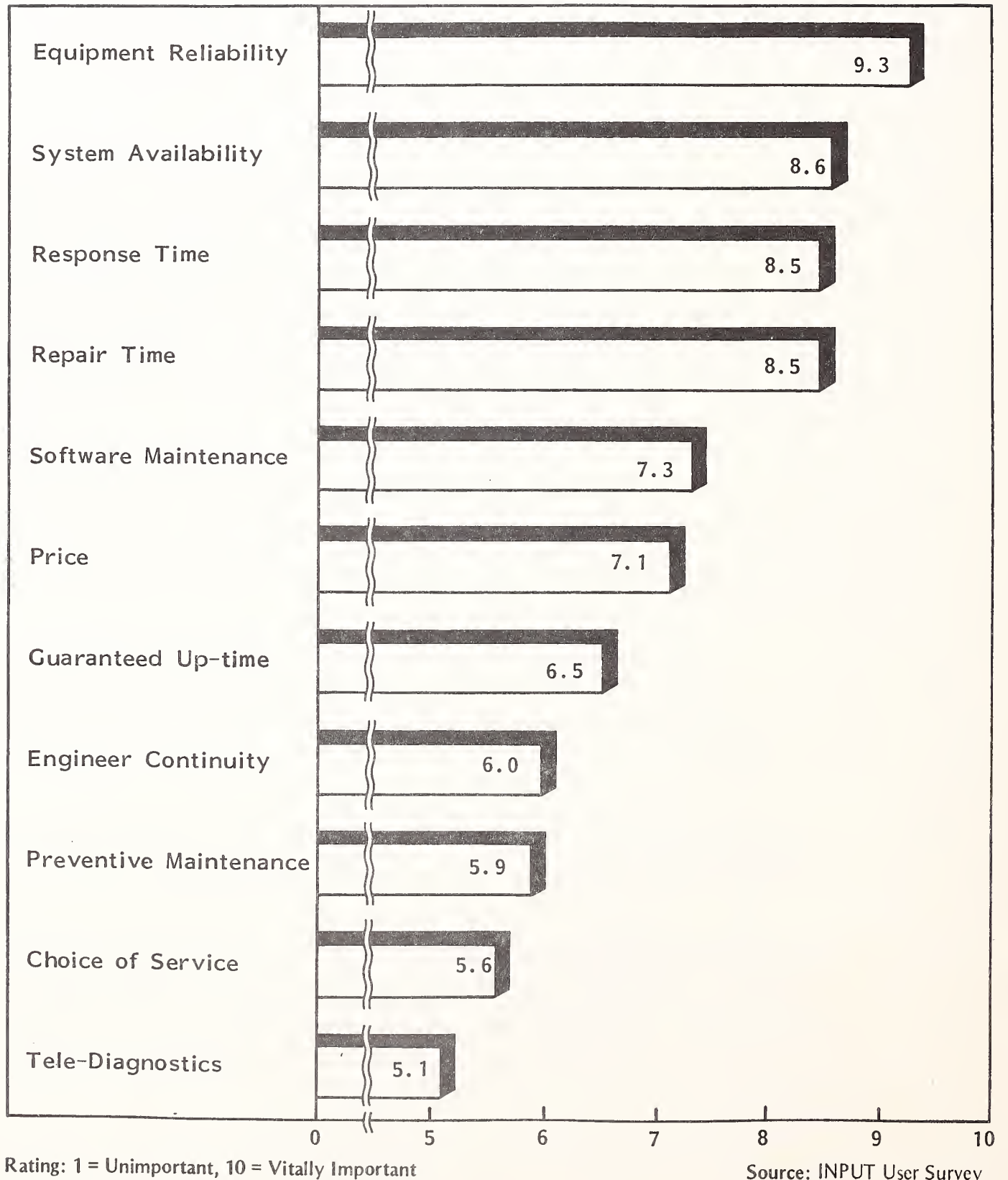
- In the telephone contact, however, no prompting was given to ensure that only those issues uppermost in users' minds were mentioned. Users were asked to give up to five key service elements which they rated as important. Interestingly, not one of the users interviewed was able to identify five elements. Those mentioned as important were:

  - Equipment reliability.

  - System availability.

  - Response time.

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II SYSTEM AVAILABILITY

II   SYSTEM AVAILABILITY

- After reliability, system availability was quoted by users as the most important service need. Most users ask for the highest level of availability that they feel they can obtain within the bounds of realism. A significant number quote 100% availability as the desired level. Some go even further, saying that 100% is the minimum level which they can accept.

A.   LARGE SYSTEMS

- Overall, users in the U.K. would like a 96.9% level of system availability. IBM users demand fractionally less--96.8%--while ICL users demand a slightly lower again level at 96.4%. Exhibit II-I shows the distribution of user requirements for system availability and compares the demands of IBM and ICL users.

    - IBM users are more demanding than ICL users. Over 80% of ICL users want an availability less than, or equal to, 99%, while only 52% of IBM users would tolerate such a level.

- German users are even more demanding, requiring an average 98.3% availability, compared to the 96.8% demanded by U.K. users. The distribution confirms that impression, with only 2% of users accepting less than 90% availability, compared to 5% of U.K. users. At the other end of the scale,

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EXHIBIT II-1

U.K. USER REQUIREMENT: LARGE SYSTEM AVAILABILITY

Percent System Availability Desired

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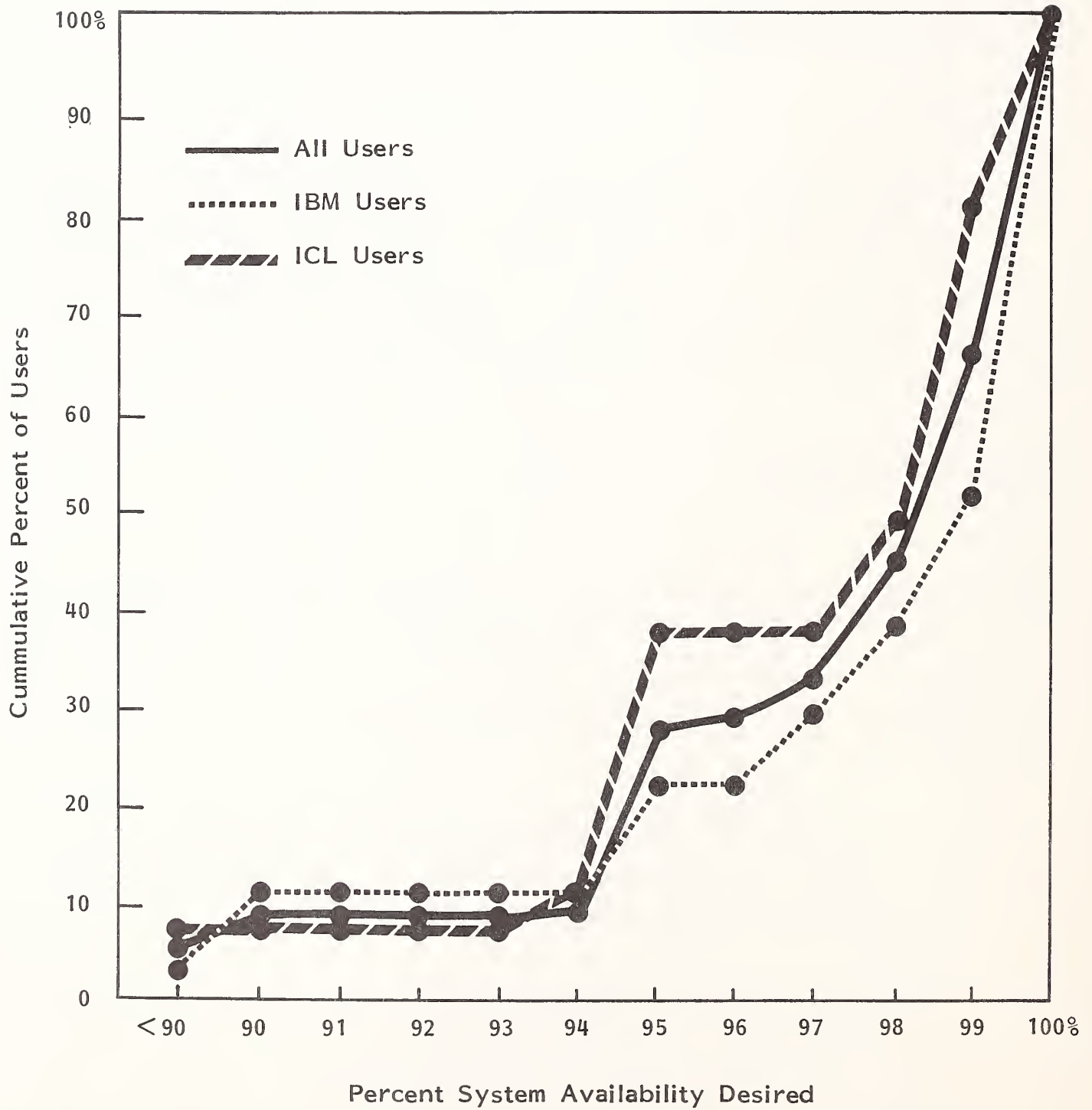
only 61% of German users will settle for an availability of less than, or equal to, 99%, while 66% of the U.K. users will do so.

- In France, users are less demanding than either U.K. or German users. Over 70% of French users are prepared to accept an availability of 99% or less, and 18% are willing to accept a lower than 90% availability. Exhibit II-2 shows the comparative situation.

B.   SMALL SYSTEMS

- As one would expect, user demands are less stringent for small systems when compared to large systems. In the U.K., the average level demanded is 93.4%, compared to only 85.4% required in France and 97.9% in Germany.

- The distribution of requirements, shown in Exhibit II-3, confirms that French users have lower requirements than those in the U.K. or Germany. Sixty-one percent of French users are satisfied with an availability level of 95% or lower, compared to only 38.5% of German users and 53% of U.K. users prepared to tolerate that level.

- German users have very high requirements, with over 30% of them demanding an availability of over 99%, while only 25% of British users and 17% of French users have such stringent demands.

C.   PERIPHERALS AND TERMINALS

- As can clearly be seen in Exhibit II-4, there are very significant differences in the requirements of German users when compared with those from France or the U.K. Only 20% of German users accept a 95% level of availability as satisfactory, whereas 46% of U.K. users and 49% of French users would do so.

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EXHIBIT II-2

SYSTEM AVAILABILITY USER REQUIREMENTS:
UNITED KINGDOM, FRANCE, GERMANY

LARGE SYSTEMS

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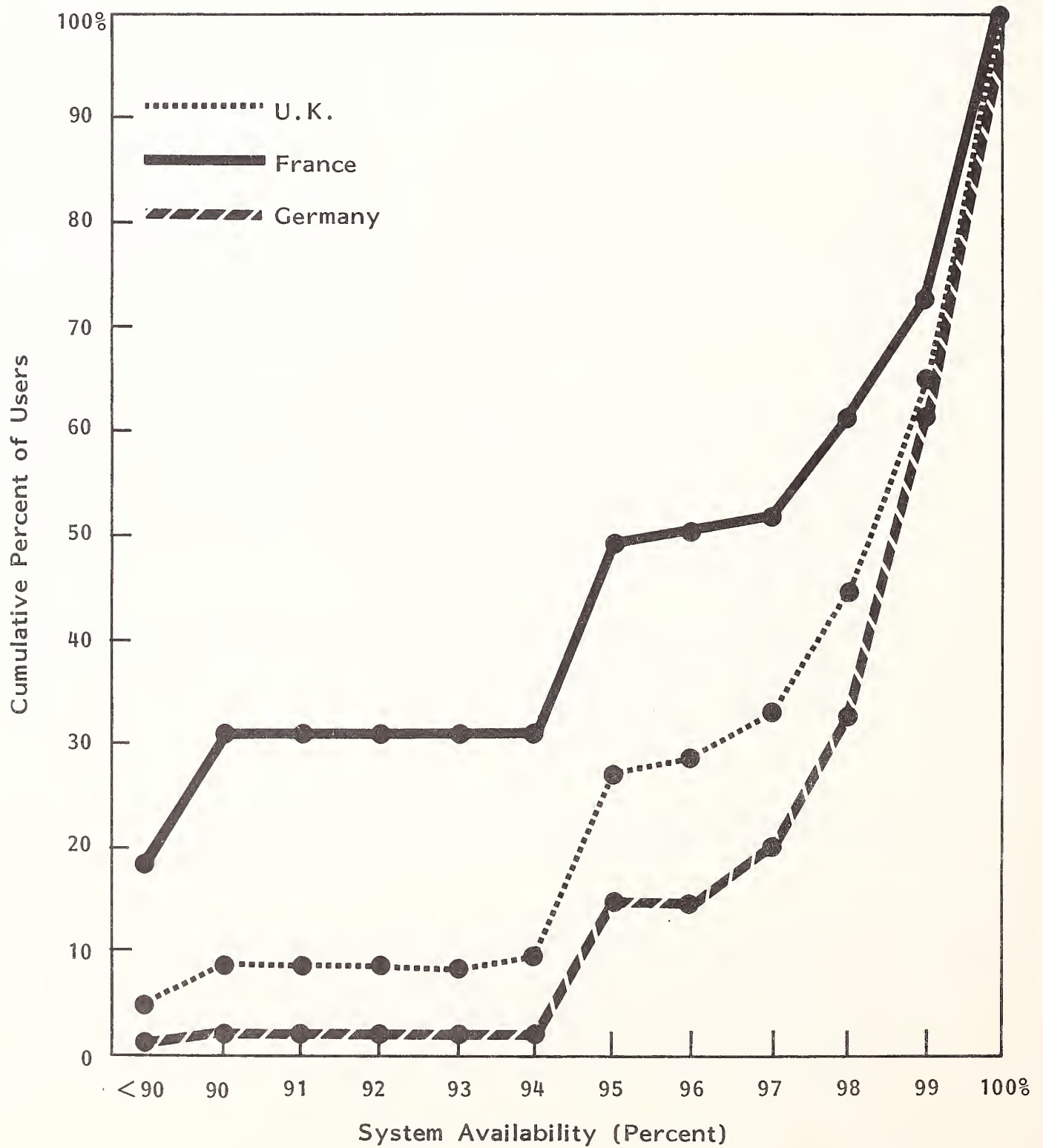
EXHIBIT II-3

SYSTEM AVAILABILITY USER REQUIREMENTS:
UNITED KINGDOM, FRANCE, GERMANY
SMALL SYSTEMS
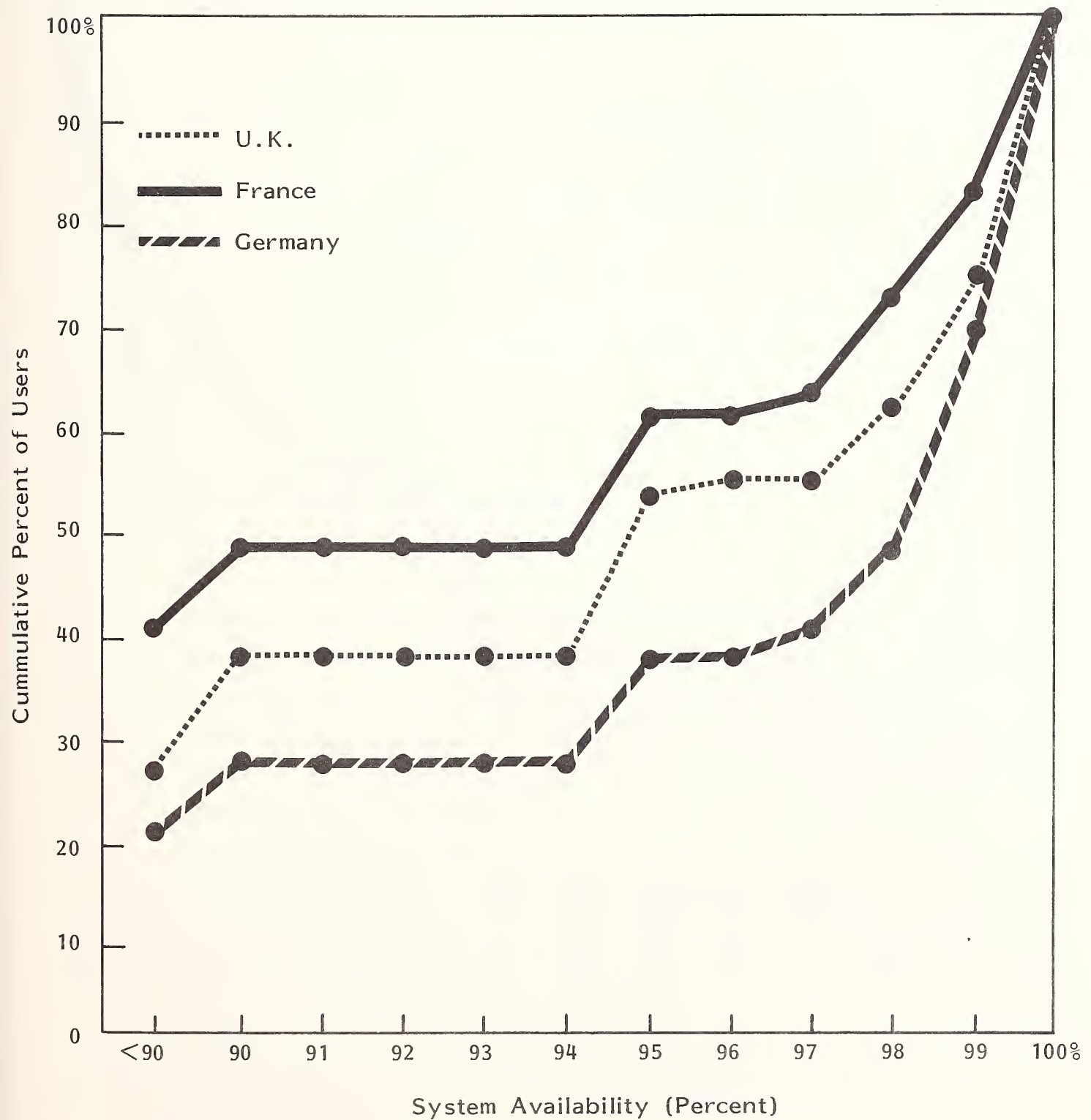
EXHIBIT II-4

SYSTEM AVAILABILITY USER REQUIREMENTS:
UNITED KINGDOM, FRANCE, GERMANY
PERIPHERALS AND TERMINALS

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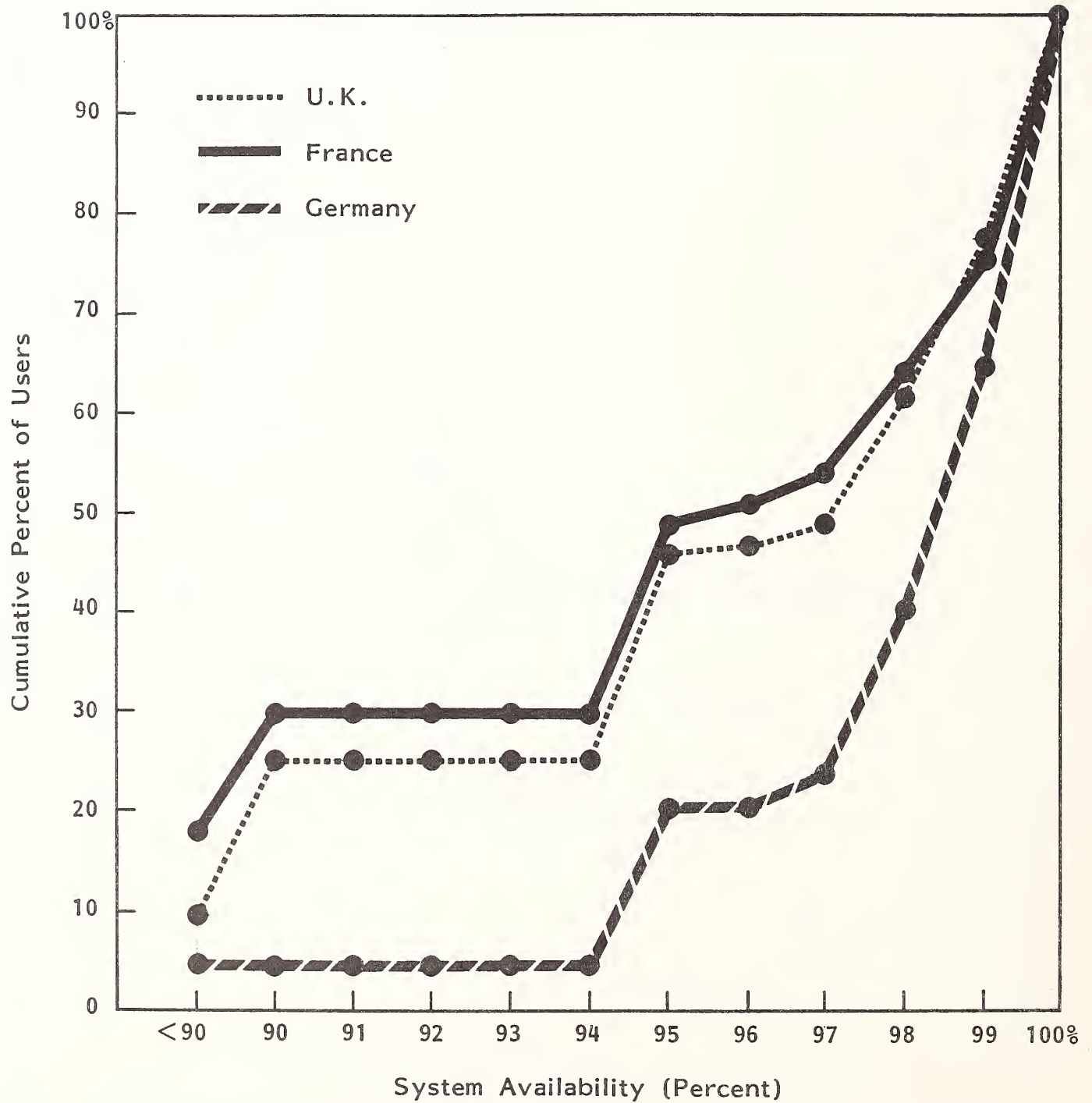
- On average, U.K. users would like an availability level of 94% and French users a level of 88.8%, while the German user ideal is 97.9%.

D.   DATA COMMUNICATIONS EQUIPMENT

- Once again, there is a very clear difference between the extremely high requirements of German users and the more modest demands of the U.K. and French users. Over 60% of German users would ideally like an availability level of 100%, compared to 55% of U.K. users and 39% of French users. Lower in the scale, 24% of U.K. users and 30% of French users would be satisfied with an availability of 95% or lower, whereas only 9% of German users would be satisfied with 95%, and none would like a level below 95% (see Exhibit II-5).

E.   OFFICE AUTOMATION EQUIPMENT

- As might be expected, user requirements for this product group are rather less stringent than those for other products. Over half of the U.K. and French users would like an availability level of 95% or lower, although only 29% of German users are prepared to settle for such a low level. At the other end of the scale, about one-quarter of all users say that their ideal level of availability is 100% (see Exhibit II-6).

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EXHIBIT II-5

SYSTEM AVAILABILITY USER REQUIREMENTS:
UNITED KINGDOM, FRANCE, GERMANY
DATA COMMUNICATIONS EQUIPMENT

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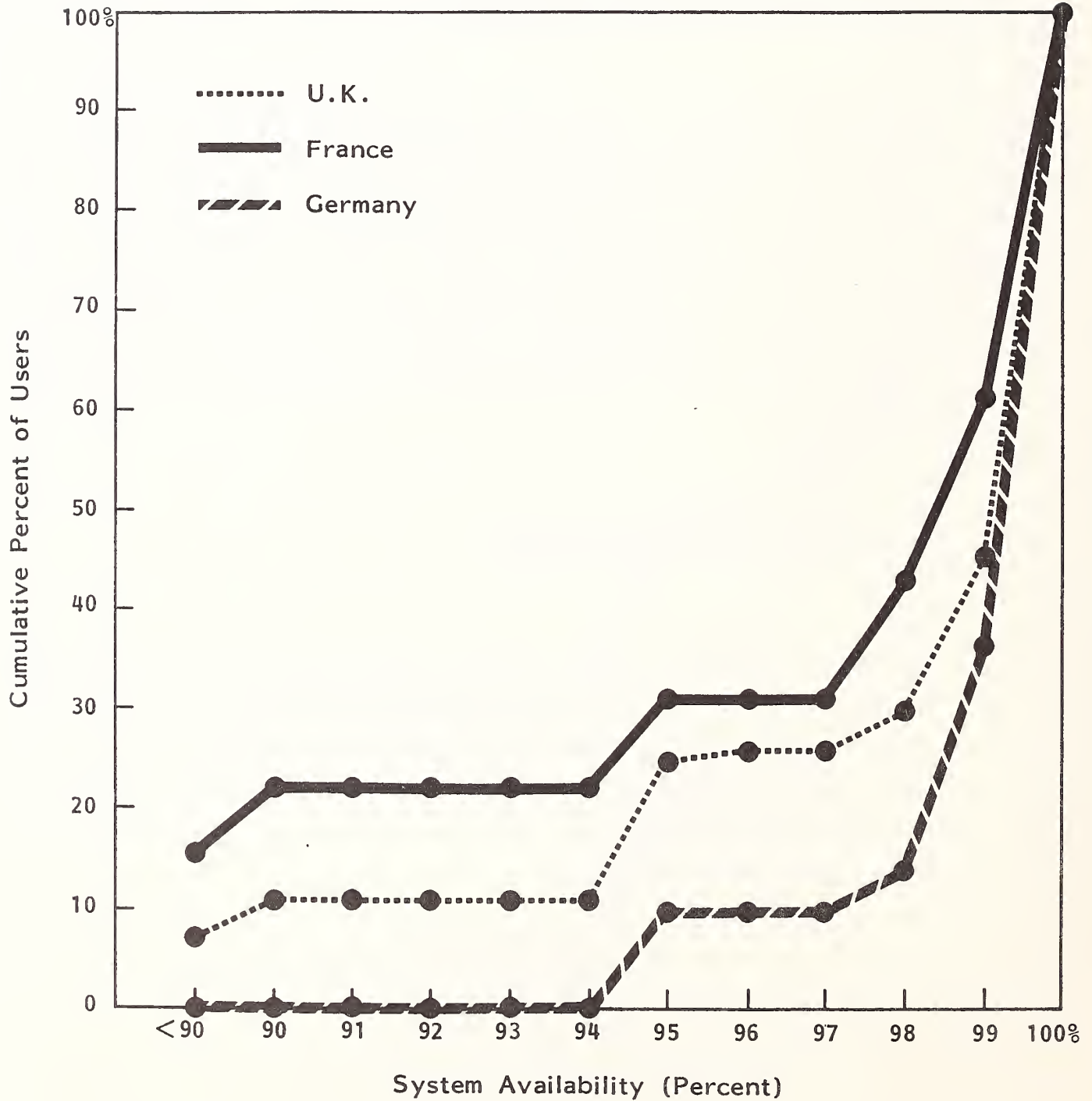
EXHIBIT II-6

SYSTEM AVAILABILITY USER REQUIREMENTS:
UNITED KINGDOM, FRANCE, GERMANY
OFFICE AUTOMATION EQUIPMENT

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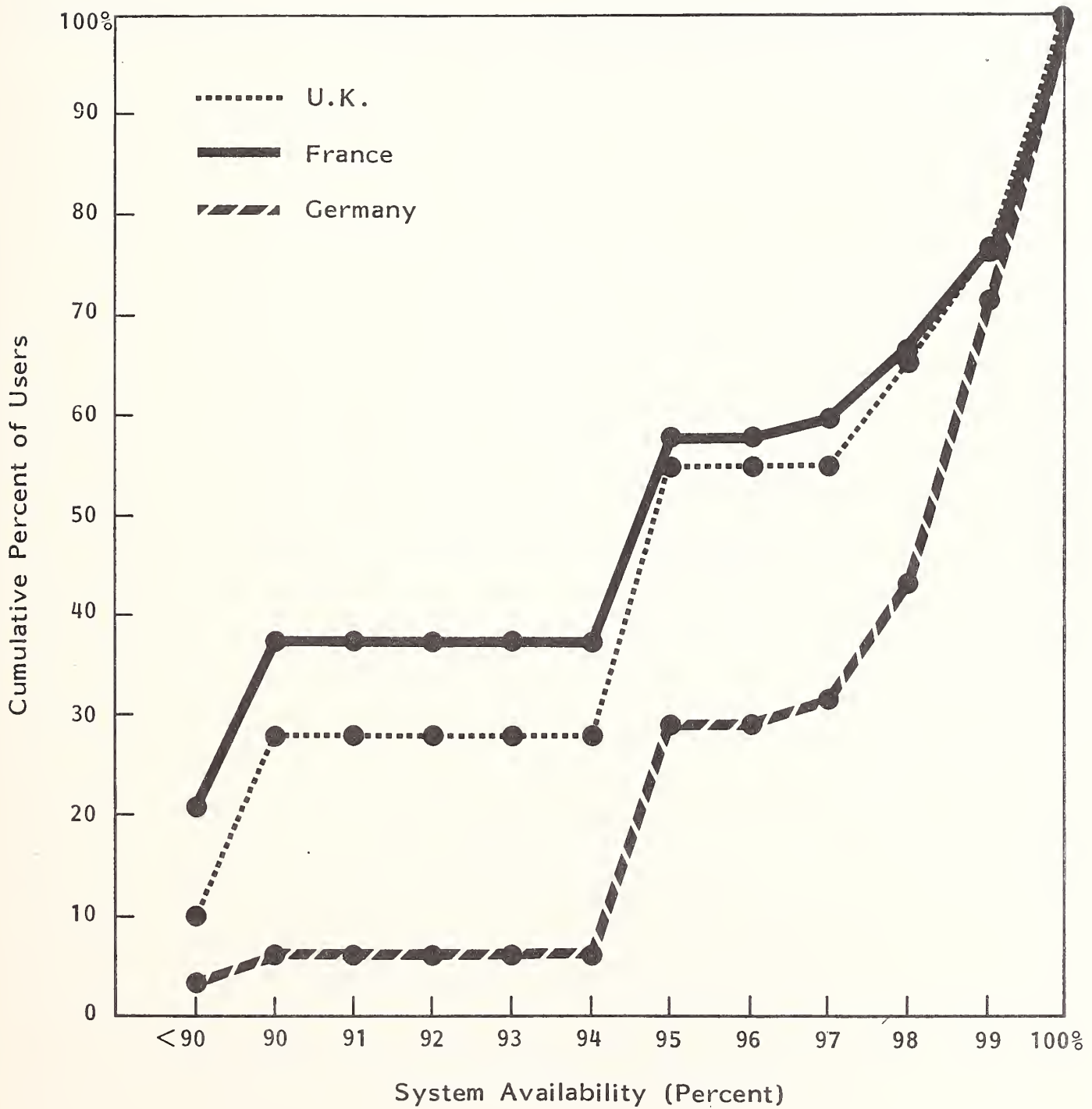
F. COPIERS

- Again, requirements are not as stringent as for the more major systems. Thirty-five percent of U.K. users see 90% or even lower as their ideal requirement, while an availability of 95% would satisfy the needs of almost one-half of the German users (see Exhibit II-7).

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EXHIBIT II-7

SYSTEM AVAILABILITY USER REQUIREMENTS:
UNITED KINGDOM, FRANCE, GERMANY
COPIERS
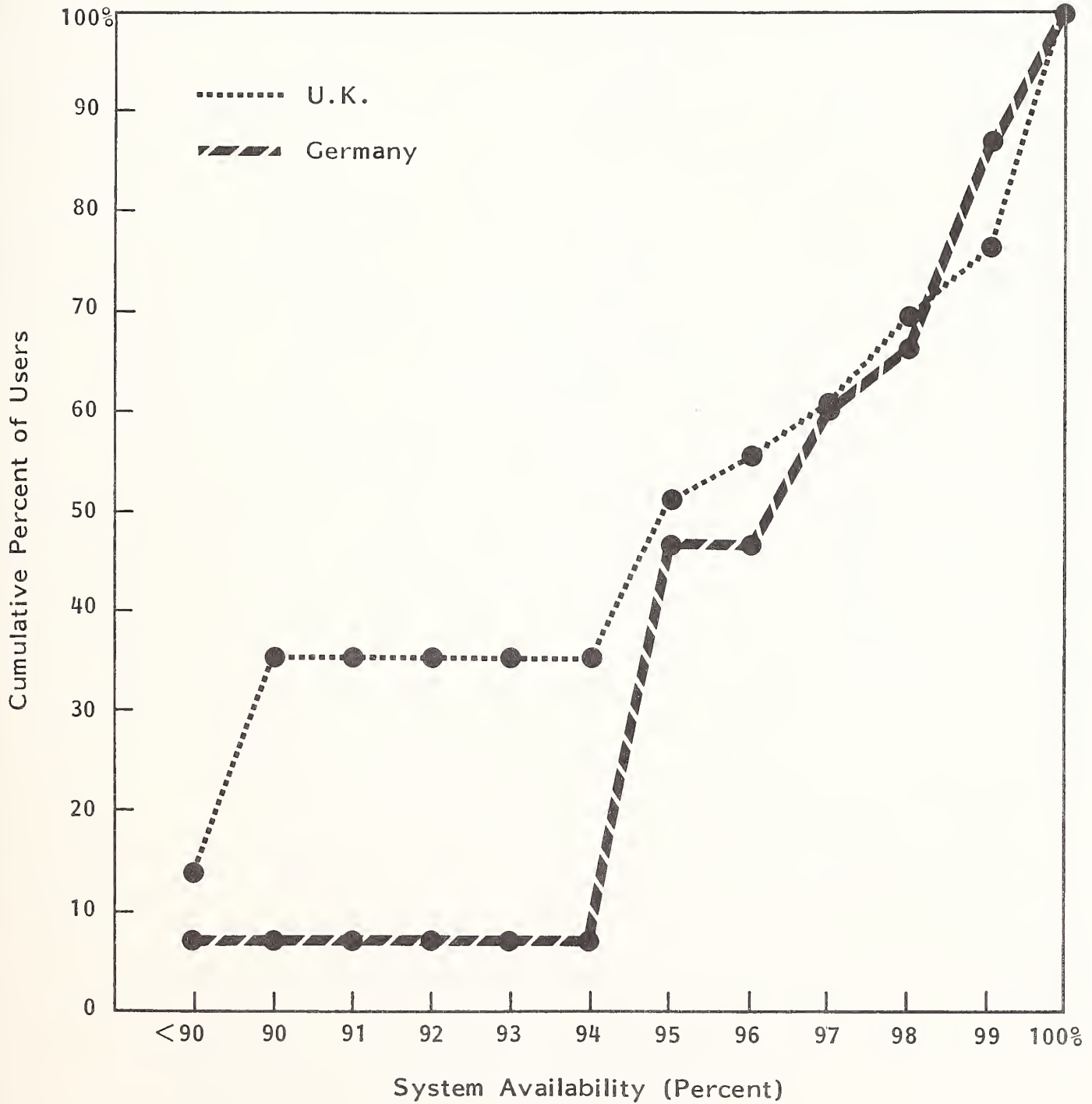
INPUT
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III RESPONSE TIMES

III   RESPONSE TIMES

A.   GENERAL

- Users frequently mention response time as a key priority area. In this survey, INPUT explored the relative importance of response time compared to overall repair turnround time (response and repair time).

- Users were asked whether they would be prepared to accept a longer response time if it resulted in a faster repair and hence overall a more rapid turnround time. Given effective remote diagnostics, it is a realistic contention that vendors may wish to take longer diagnosing the fault centrally before dispatching an engineer to effect the repair. In the current scenario where users are criticising engineers for their lack of product knowledge and vendors in general for failing to have the right parts available, this would seem to be a reasonable approach.

- Not so! Users surveyed were very sceptical about the current effectiveness of remote diagnostics and would still press for the fastest possible response time. The general view is that until the engineer arrives, it will not be possible to diagnose the fault or, consequently, cure it. Once on-site, users are more sanguine about the repair time. When prompted, most would say they expect the repair to be completed within a given time, but conceded the fact that not all repairs were of equal difficulty; hence, not all repairs could be effected equally quickly.

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- The focus, therefore, falls on two key areas:

    - The development and introduction of effective remote diagnostic procedures.

    - Actual response times being experienced by users.

- Effective remote diagnostics can be a valuable tool in helping to increase the effective use of engineers and, if used properly, in improving the overall quality of the service delivered to the user. With each engineer's call costing an average $212 (see Exhibit III-1) and with 25% of the calls being to some extent fruitless either because of inability to complete the repair on the first visit or no fault being found, the scope for improved profit performance is considerable.

B.   UNITED KINGDOM

1.   LARGE SYSTEMS

- The great majority of users of large systems would like response time of four hours or less, with almost one-third aiming for a response within one hour. Exhibit III-2 shows the complete picture. The ideal is only slightly more ambitious than the longest acceptable delay which, as seen in Exhibit III-3, shows that almost 90% of users still expect a response within four hours.

2.   SMALL SYSTEMS

- Again, the key requirement is for a response within four fours, which is the ideal of almost 90% of users, with over one-half aiming for a response of less than two hours. Four hours is also the longest delay acceptable to over 80% of users (see Exhibits III-4 and III-5).

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EXHIBIT III-1

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COST COMPONENT OF A TYPICAL CALL

Overhead
22.0%

Direct Labour
29.8%

Other Non-
Labour Travel
Costs
11.8%

Parts and
Materials
17.2%

Labour Travel
Costs
19.2%
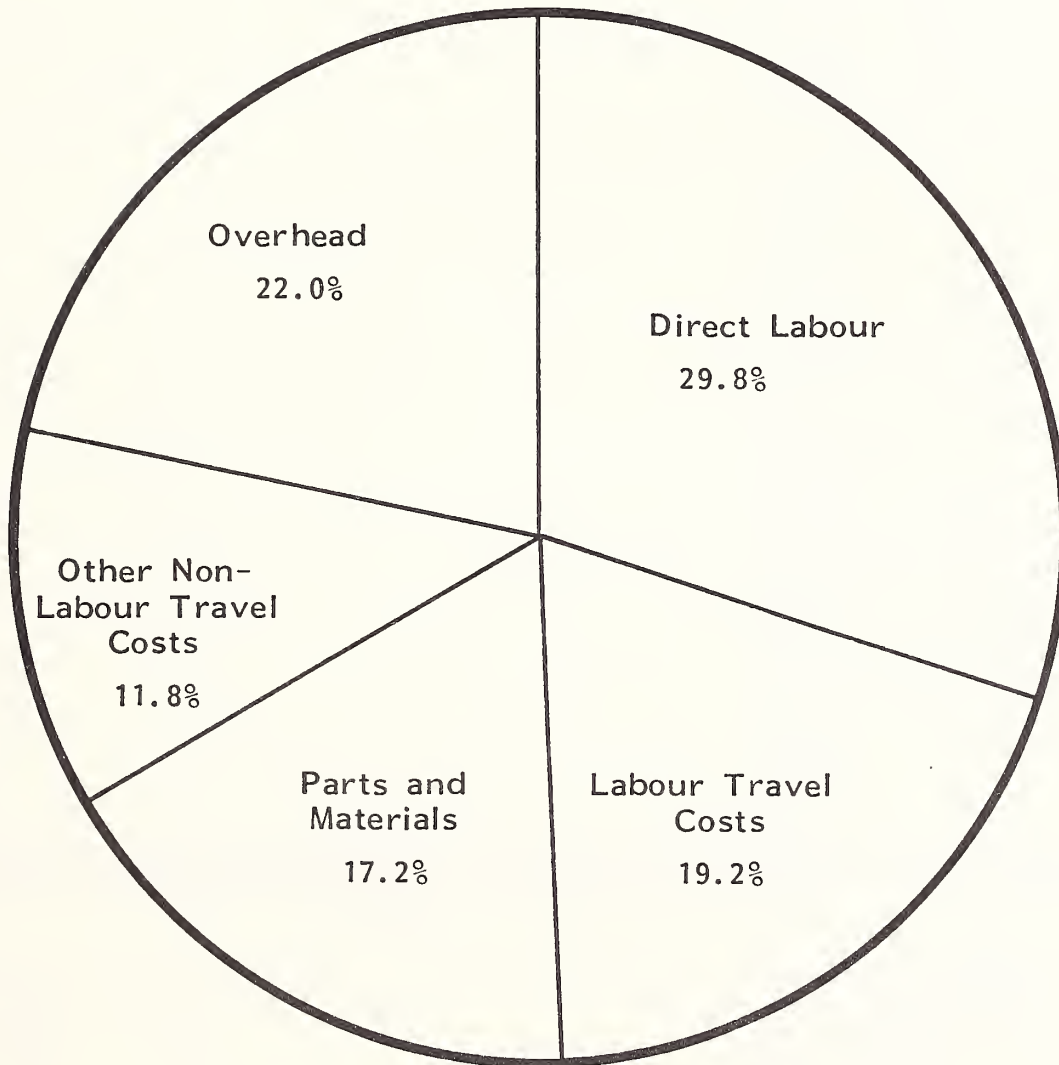
Percent of Total Cost of $212

INPUT
FAE4 FBUR

EXHIBIT III-2

RESPONSE TIMES: IDEAL REQUIREMENT OF U.K. USERS - LARGE SYSTEMS

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
33.0%	68.1%	75.8%	98.9%	98.9%	98.9%	98.9%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
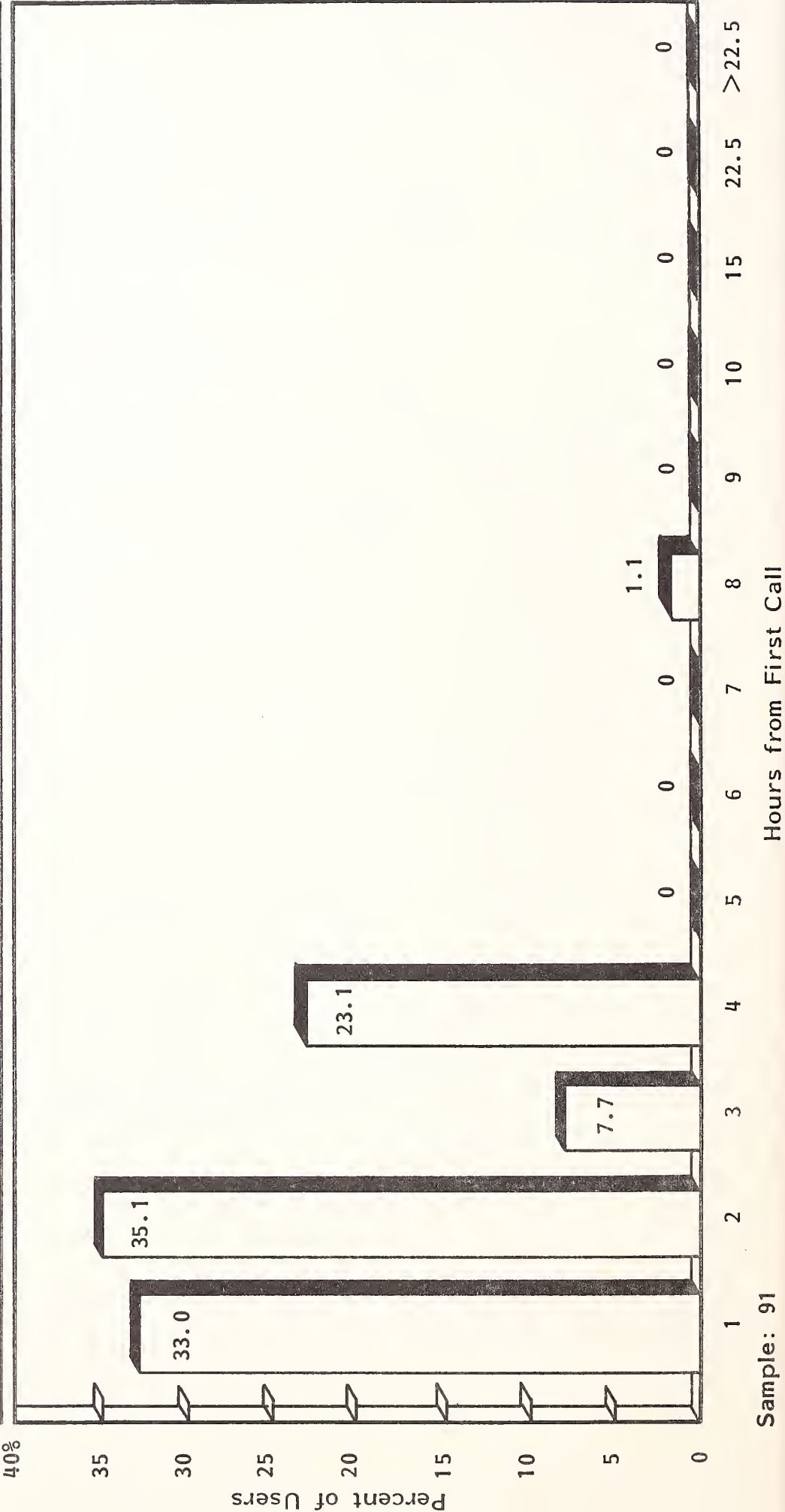
Sample: 91

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EXHIBIT III-3

RESPONSE TIME: LONGEST TIME DELAY ACCEPTABLE TO U.K. USERS – LARGE SYSTEMS

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
15.6%	46.9%	57.3%	89.6%	94.8%	94.8%	94.8%	96.9%	96.9%	96.9%	99.0%	99.0%	100.0%

Sample: 96

EXHIBIT III-4

RESPONSE TIMES: IDEAL REQUIREMENT OF U.K. USERS - SMALL SYSTEMS

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

	1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
	18.1%	56.3%	61.1%	88.9%	89.6%	91.0%	91.0%	93.1%	93.1%	93.8%	95.8%	95.8%	100.0%

Percent of Users

40%

35

30

25

20

15

10

5

0

18.1

38.2

4.7

27.8

0.7

1.4

0

2.1

0

0.7

2.1

0

4.2

1   2   3   4   5   6   7   8   9   10   15   22.5   >22.5

Hours from First Call

Sample: 144

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EXHIBIT III-5
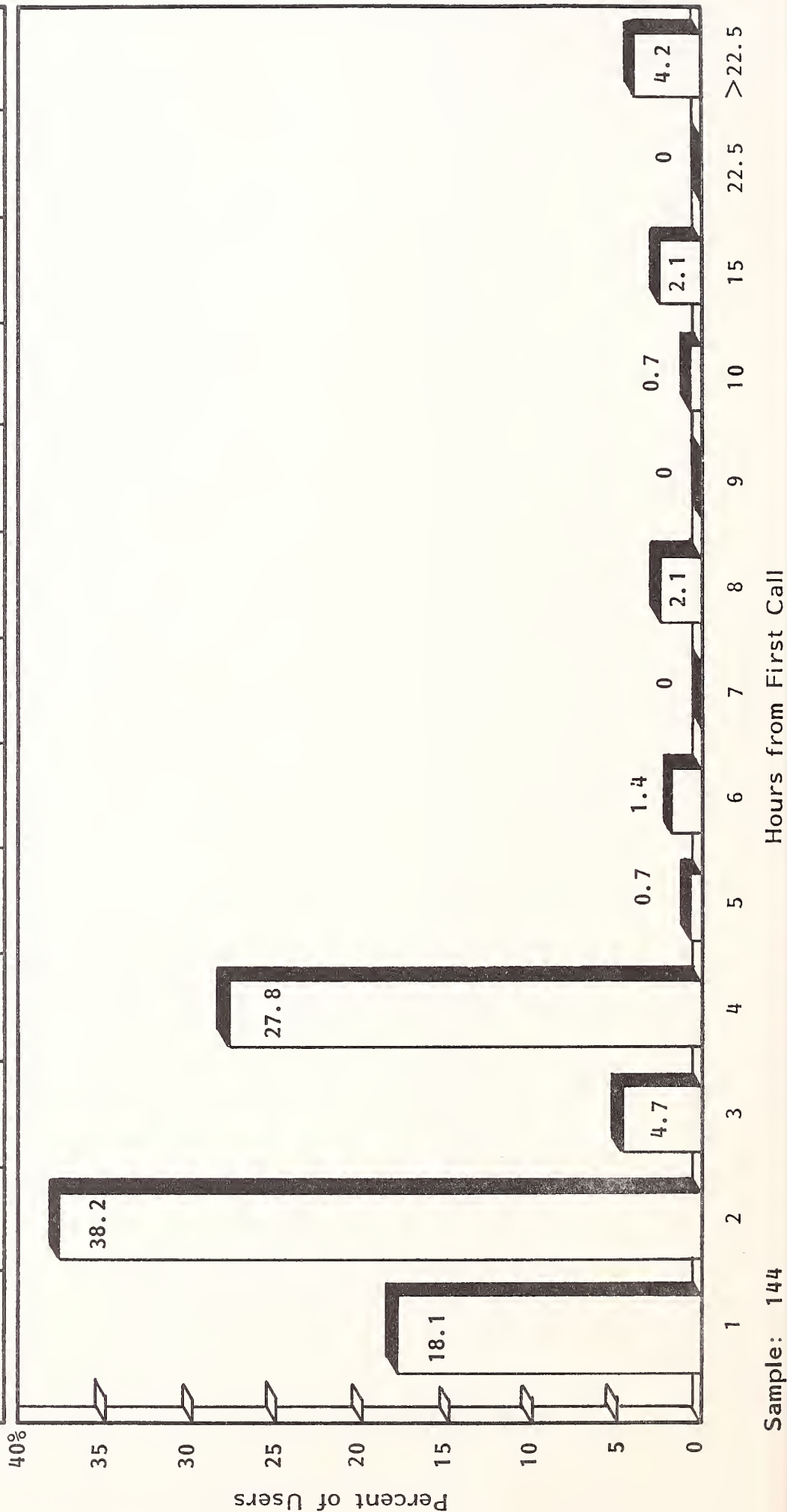
RESPONSE TIME: LONGEST TIME DELAY ACCEPTABLE TO U.K. USERS - SMALL SYSTEMS

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

	1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
	7.4%	34.5%	43.2%	82.4%	83.1%	86.5%	86.5%	92.6%	92.6%	93.2%	93.9%	93.9%	100.0%

Percent of Users

40%
35
30
25
20
15
10
5
0

7.4   27.1   8.7   39.2   0.7   3.4   0   6.1   0   0.6   0.7   0   6.1

1   2   3   4   5   6   7   8   9   10   15   22.5   >22.5

Hours from First Call

Sample: 148

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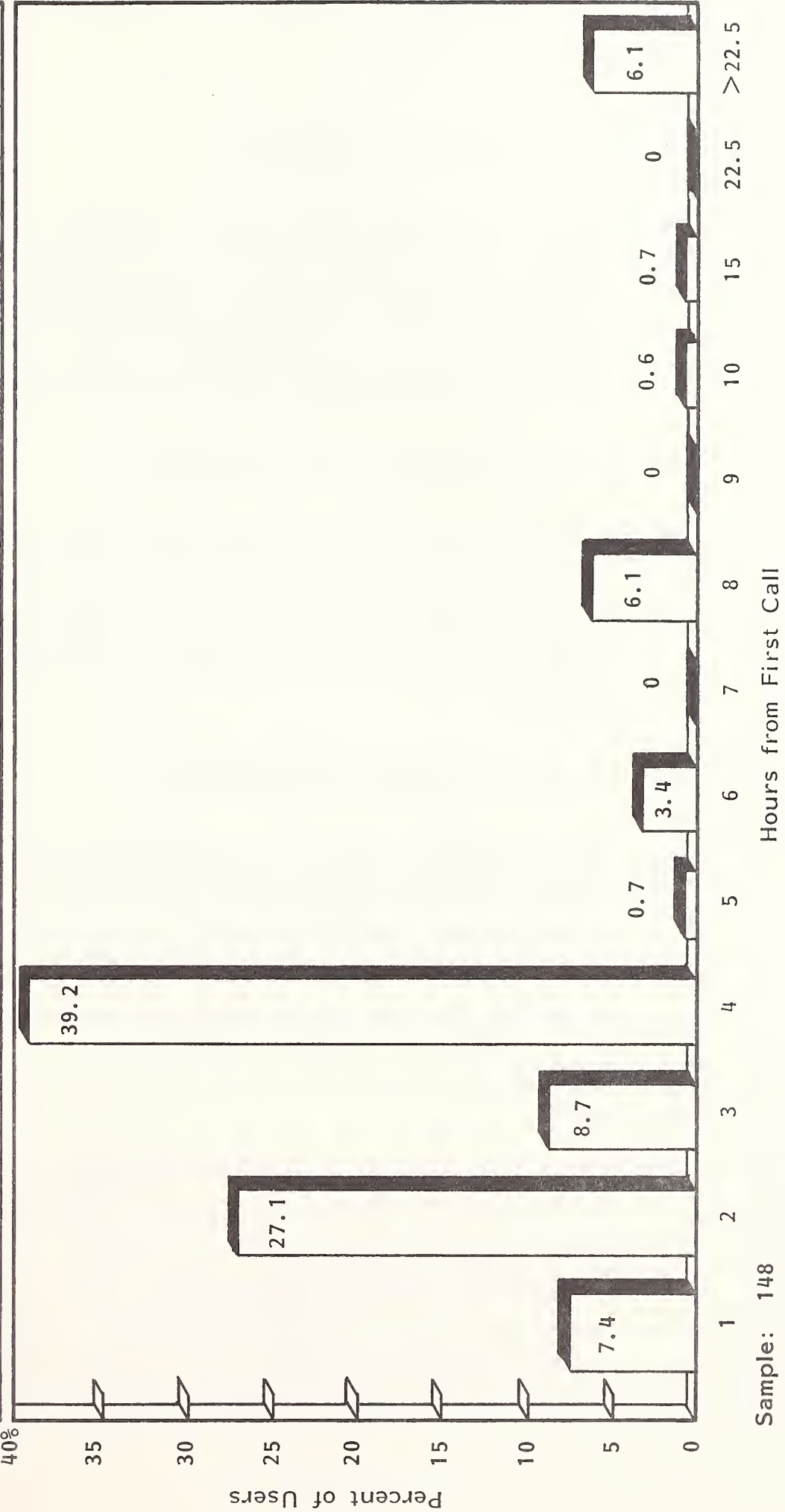
3.   PERIPHERALS AND TERMINALS

•   Although the user ideal response is slightly less stringent than that for systems, almost 80% of users are still aiming for a less than four hour response, with 45% looking for a response of less than two hours. The user 'threshold of pain' is still less stringent, with over 25% of users being prepared to accept a response time of more than five hours (see Exhibits III-6 and III-7).

4.   DATA COMMUNICATIONS EQUIPMENT

•   Over one-half of U.K. users would like a response time of three hours or less, with almost one-half (48.5%) aiming for two hours or less. Most users, however, would tolerate longer response times, but even then almost two-thirds of users still need a less than four hour response time (see Exhibits III-8 and III-9).

5.   OFFICE AUTOMATION EQUIPMENT

•   Once again, four hours is the critical time, with 61% of users looking for a response ideally within that time. Over three-quarters of users would like a response within a single working day. At the tolerance level, less than one-half of the users need a response within four hours, but two-thirds demand a response within eight hours (see Exhibits III-10 and III-11).

6.   COPIERS

•   Almost three-quarters of users would ideally like a response within four fours, with almost 90% wishing for a response within eight hours, or one working day. Thirty-six percent of users would like a response within two hours. Although the user limit of tolerance is slacker, there is still considerable pressure to respond with four or eight hours. Fifty-five percent of users still demand a response within four hours, and 72% of users want a response within eight hours (see Exhibits III-12 and III-13).

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EXHIBIT III-6

RESPONSE TIMES: IDEAL REQUIREMENT OF U.K. USERS - PERIPHERALS AND TERMINALS

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

	1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
	18.2%	45.3%	51.0%	78.5%	80.2%	80.6%	80.6%	84.6%	84.6%	85.0%	86.2%	87.0%	100.0%

Percent of Users

Hours from First Call

Sample: 247

INPUT
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EXHIBIT III-7

RESPONSE TIME: LONGEST TIME DELAY ACCEPTABLE TO U.K. USERS - PERIPHERALS AND TERMINALS

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
6.5%	31.6%	38.9%	71.3%	73.3%	78.1%	78.1%	84.2%	84.2%	84.2%	87.9%	87.9%	100.0%

Percent of Users

Hours from First Call

Sample: 247

INP
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EXHIBIT III-8
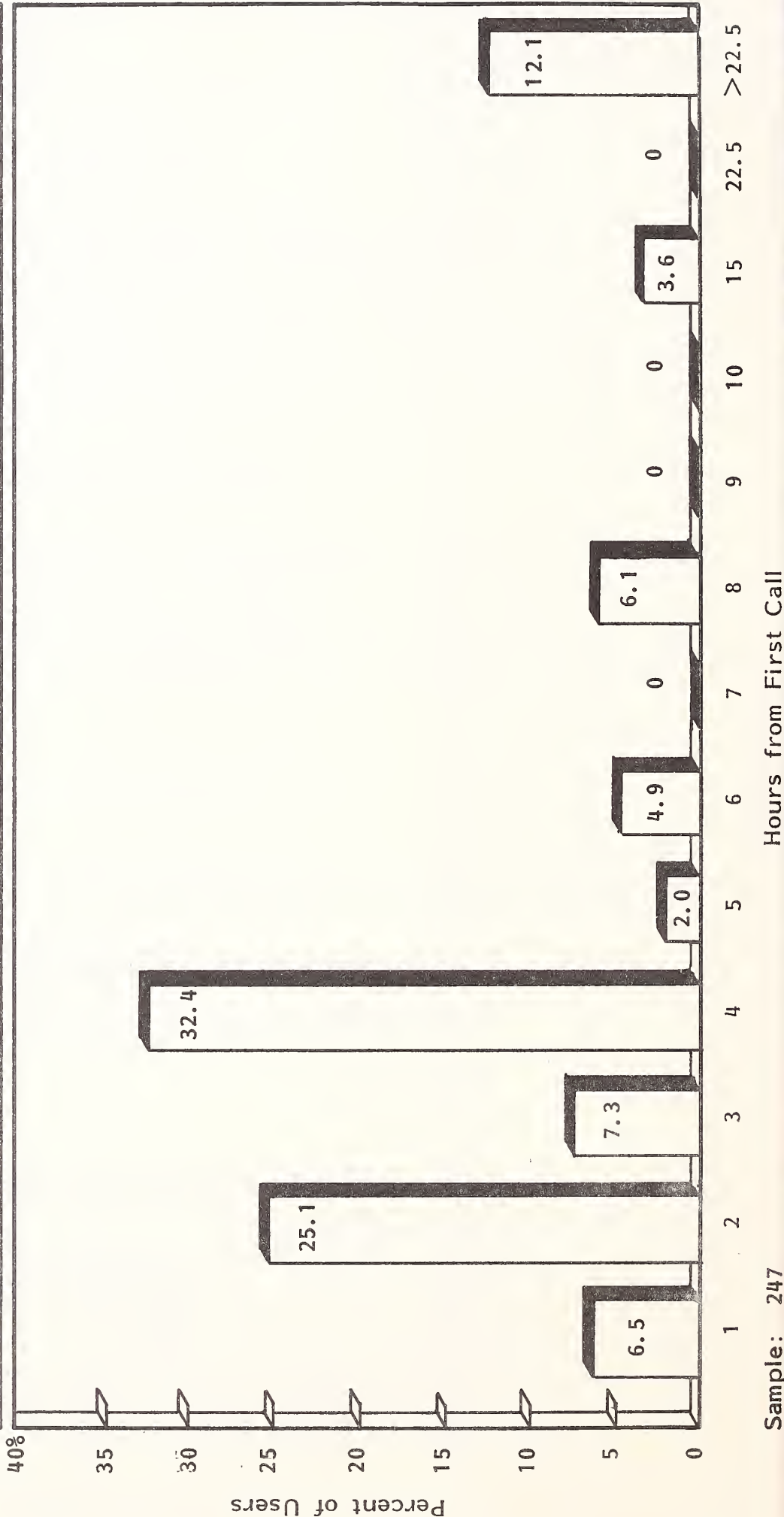
RESPONSE TIMES: IDEAL REQUIREMENT OF U.K. USERS - DATA COMMUNICATIONS EQUIPMENT

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
21.6%	48.5%	52.2%	82.8%	82.8%	83.6%	83.6%	87.3%	87.3%	87.3%	88.1%	88.1%	100.0%

Percent of Users

Hours from First Call

Hours	Percent
1	21.6
2	26.9
3	3.7
4	30.6
5	0
6	0.8
7	0
8	3.7
9	0
10	0
15	0.8
22.5	0
>22.5	11.9

Sample: 134

- 27 -

INPUT
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EXHIBIT III-9
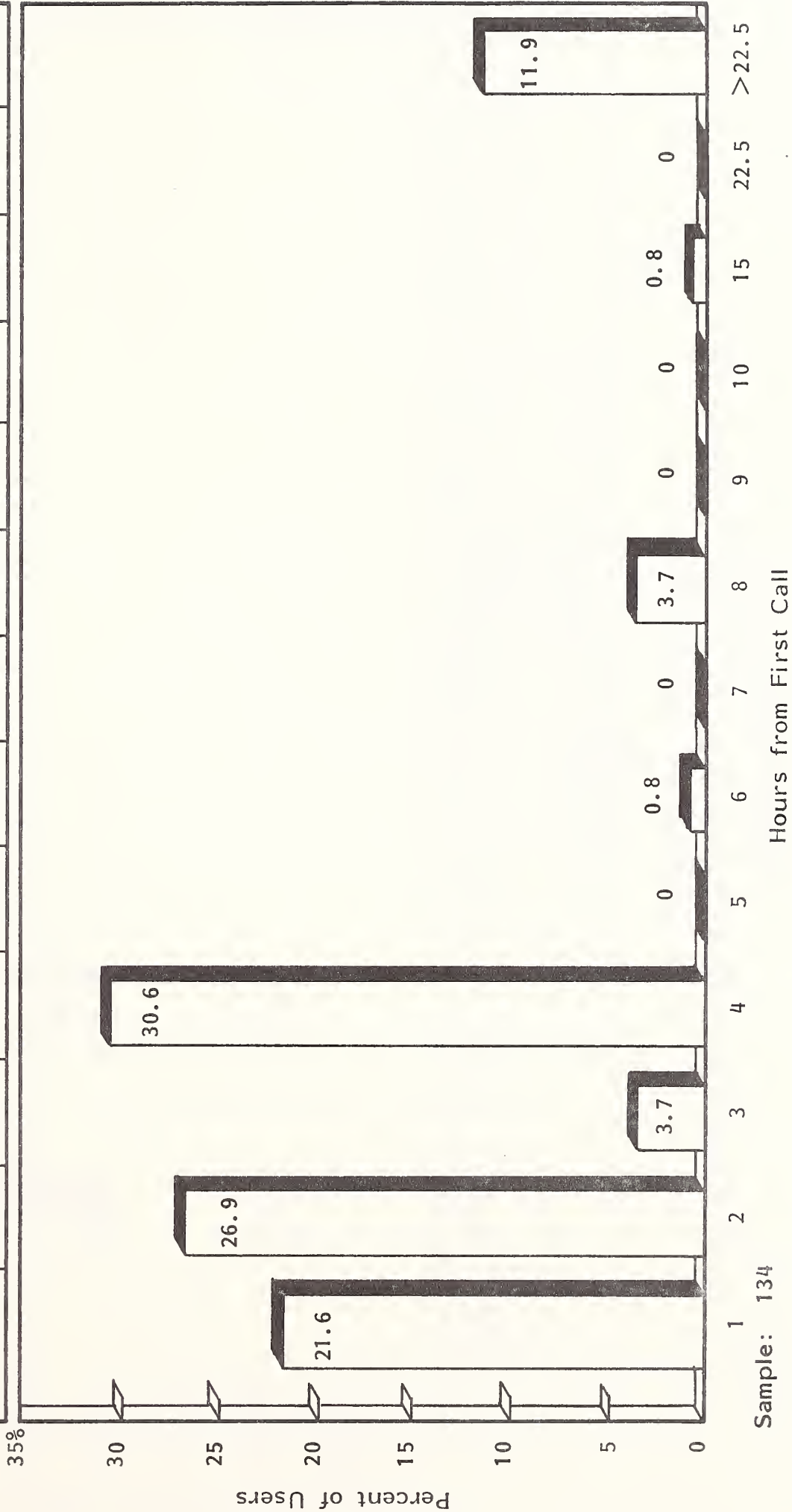
RESPONSE TIME: LONGEST TIME DELAY ACCEPTABLE TO U.K. USERS -

DATA COMMUNICATIONS EQUIPMENT

	1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
CUMULATIVE PERCENTAGE OF USERS (Hours from Call)	9.2%	29.8%	34.4%	65.6%	66.4%	73.3%	73.3%	82.4%	82.4%	82.4%	86.3%	86.3%	100.0%

Sample: 131

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INP
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EXHIBIT III-10
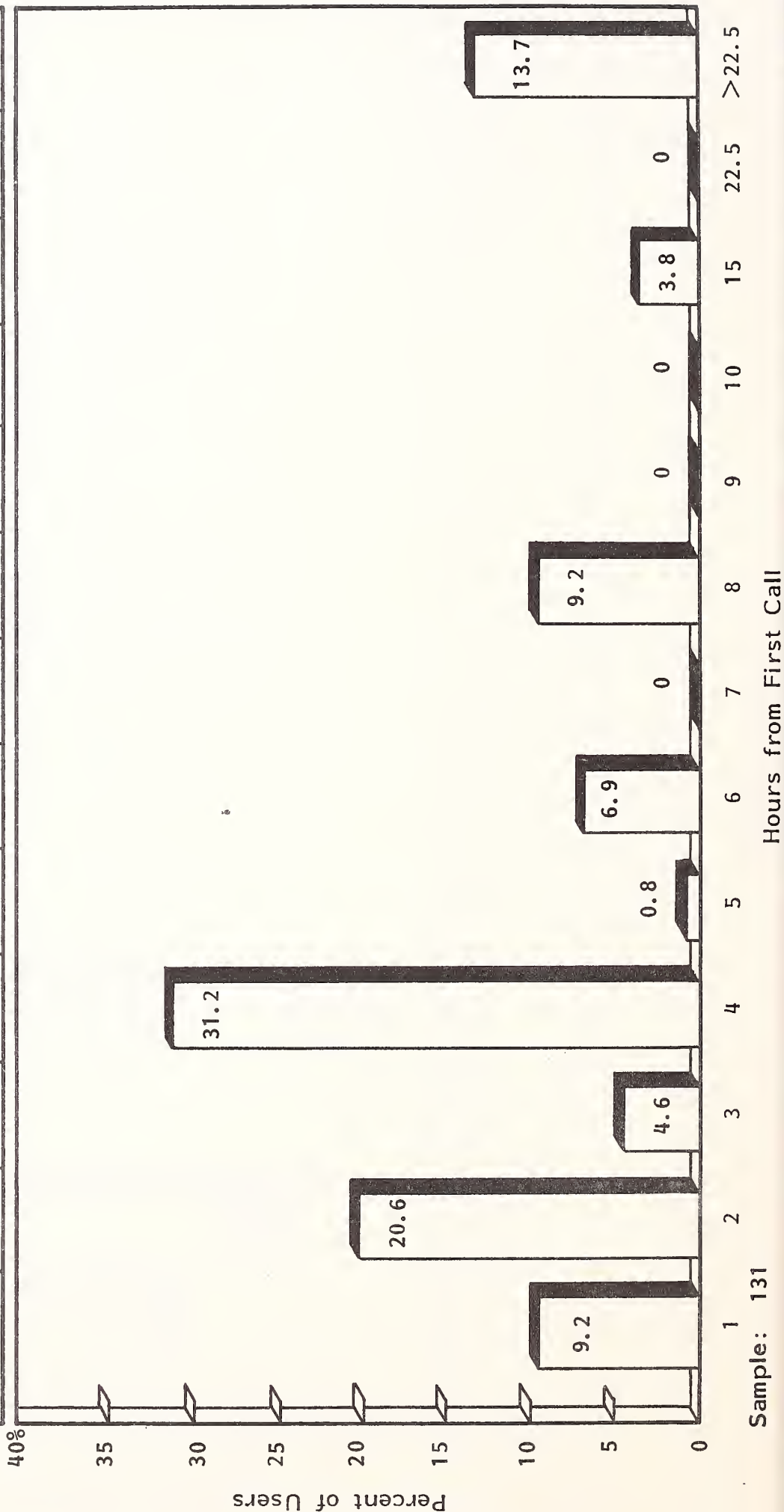
RESPONSE TIMES: IDEAL REQUIREMENT OF U.K. USERS - OFFICE AUTOMATION EQUIPMENT

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
9.6%	29.6%	32.0%	60.8%	61.6%	67.2%	67.2%	76.8%	76.8%	76.8%	79.2%	80.0%	100.0%

Percent of Users

30%
25
20
15
10
5
0

9.6
20.0
2.4
28.8
0.8
5.6
0
9.6
0
0
2.4
0.8
20.0

1   2   3   4   5   6   7   8   9   10   15   22.5   >22.5

Hours from First Call

Sample: 125

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INPUT
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EXHIBIT III-11
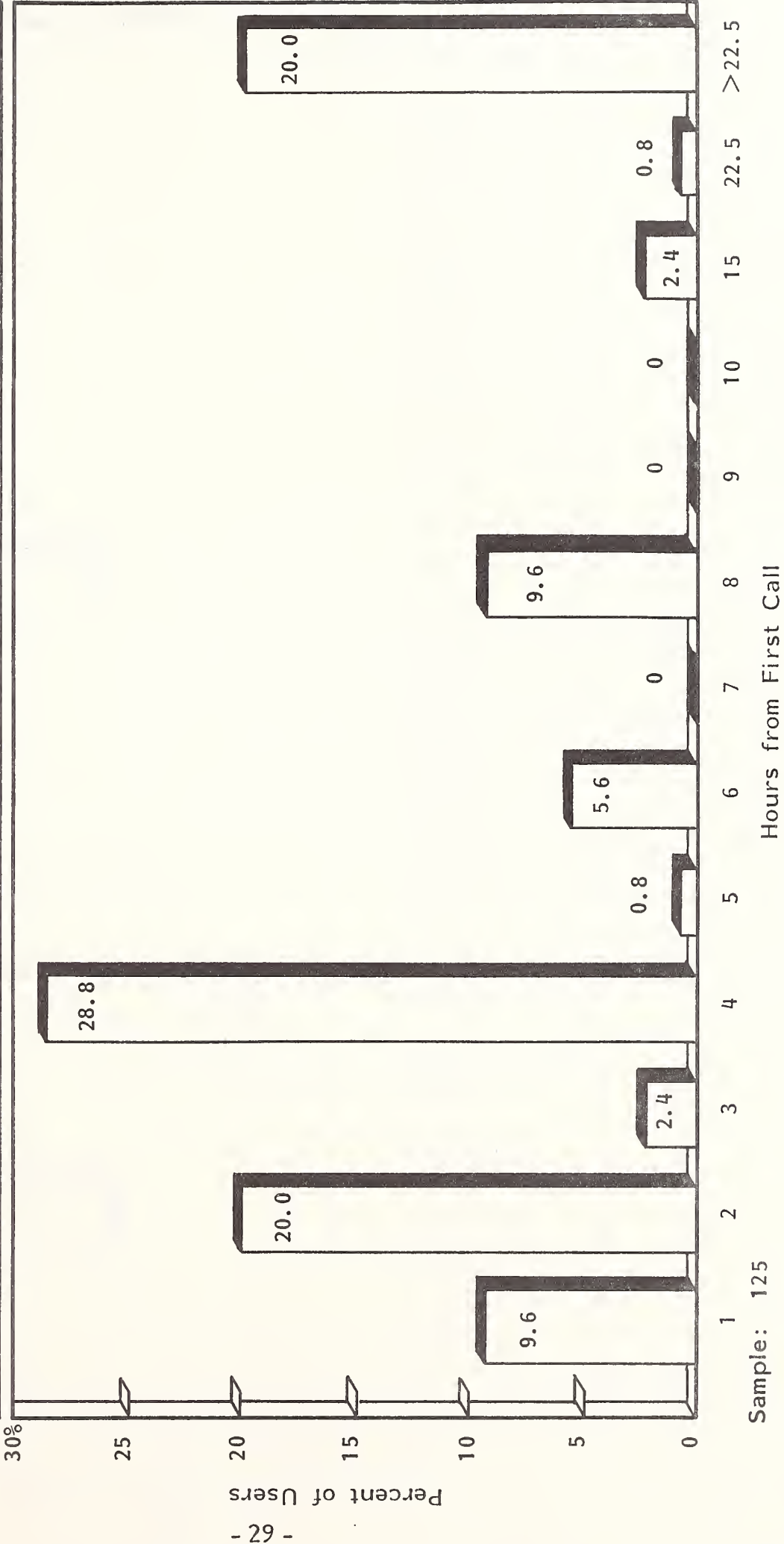
RESPONSE TIME: LONGEST TIME DELAY ACCEPTABLE TO U.K. USERS -

OFFICE AUTOMATION EQUIPMENT

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

	1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
	5.6%	22.4%	24.8%	47.2%	47.2%	52.8%	52.8%	68.0%	68.0%	68.0%	71.2%	72.0%	100.0%

Sample: 125

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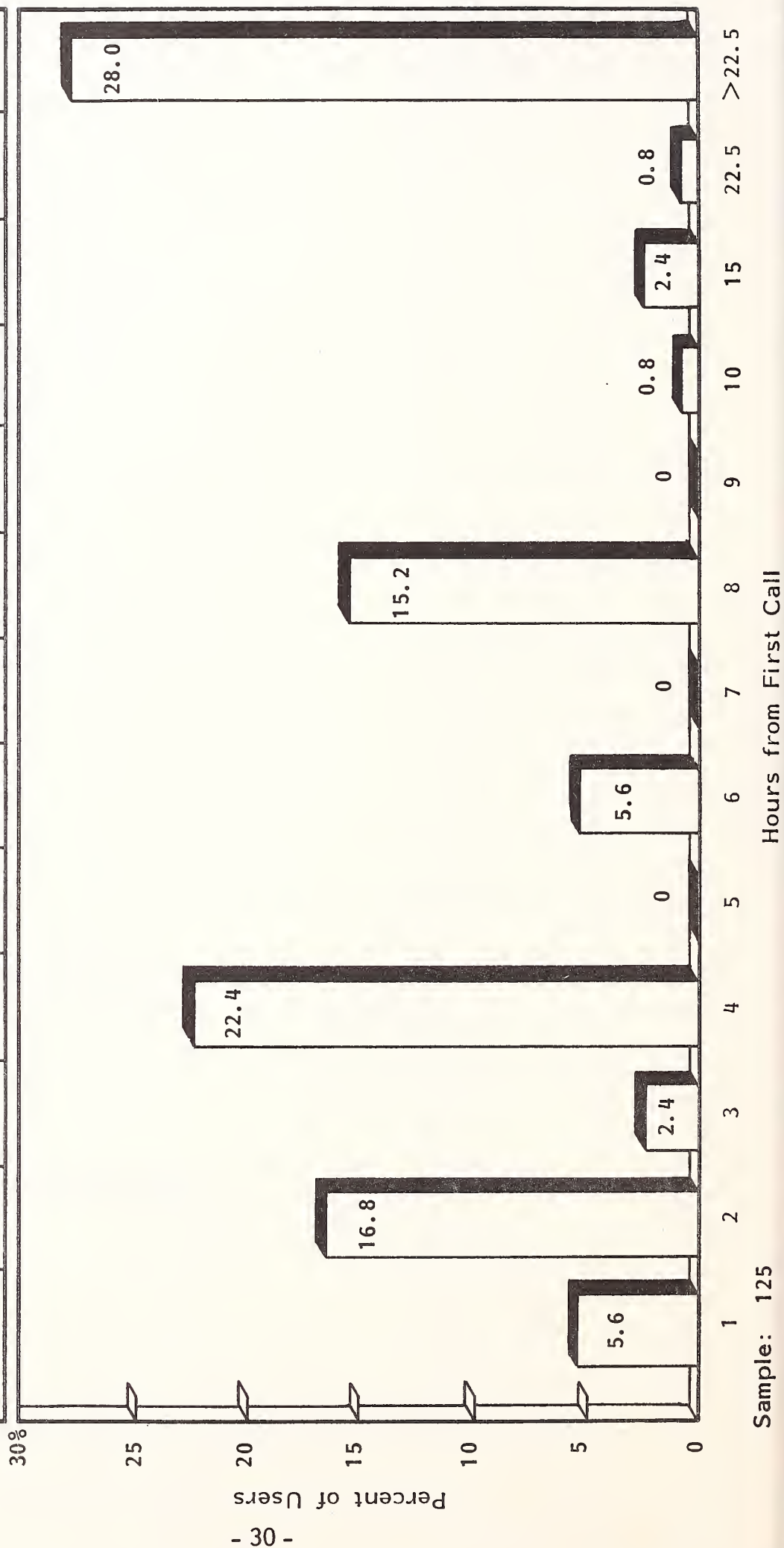
EXHIBIT III-12

RESPONSE TIMES: IDEAL REQUIREMENT OF U.K. USERS - COPIERS

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
12.8%	36.2%	36.2%	72.3%	76.6%	80.9%	80.9%	87.2%	87.2%	87.2%	87.2%	87.2%	100.0%

Percent of Users

40%

35

30

25

20

15

10

5

0

12.8

23.4

0

36.1

4.3

4.3

0

6.3

0

0

0

0

12.8

Hours from First Call

1   2   3   4   5   6   7   8   9   10   15   22.5   >22.5

Sample: 47

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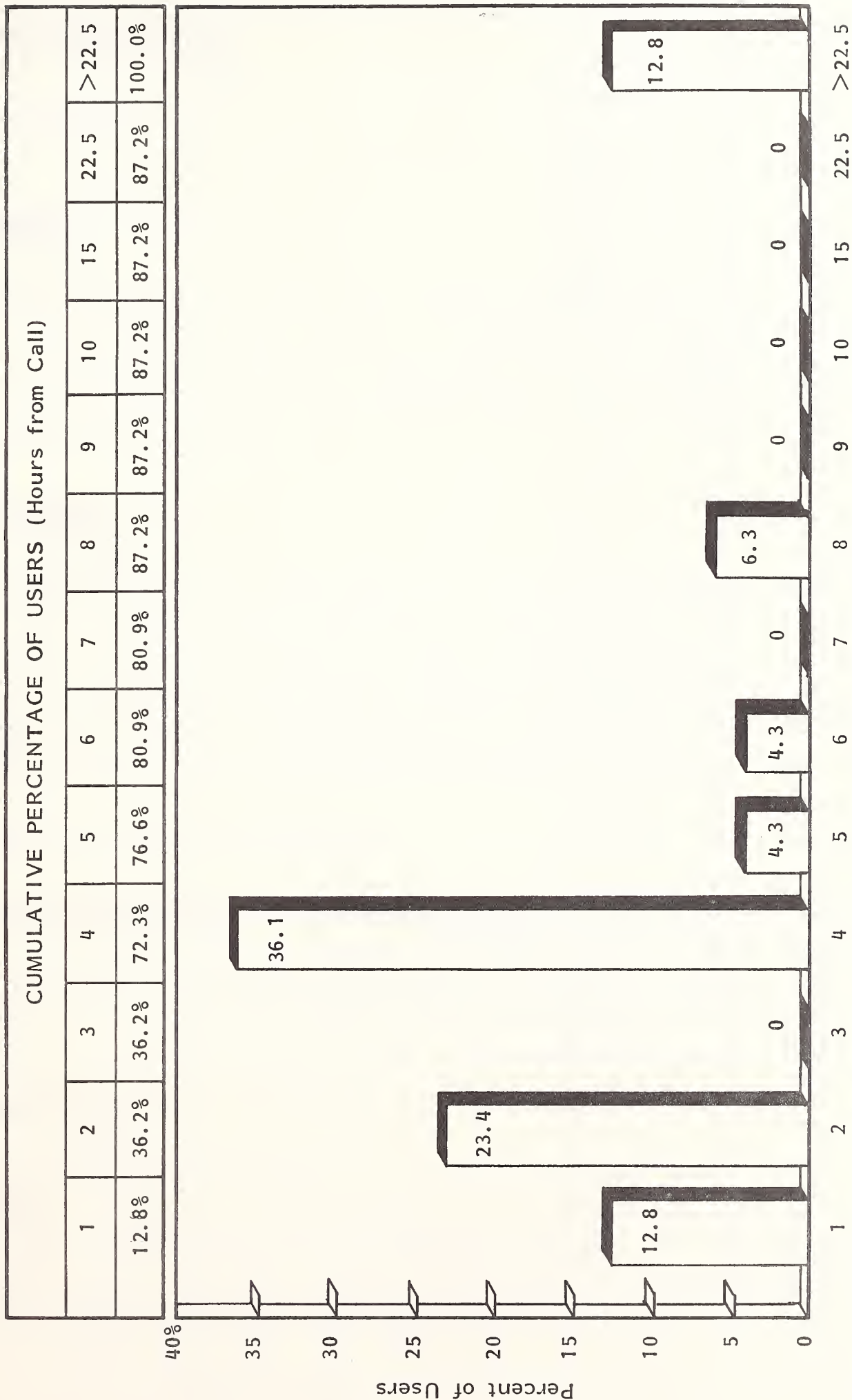
EXHIBIT III-13

RESPONSE TIME: LONGEST TIME DELAY ACCEPTABLE TO U.K. USERS - COPIERS

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

	1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
	6.4%	17.0%	19.1%	55.3%	57.4%	61.7%	61.7%	72.3%	72.3%	72.3%	80.9%	80.9%	100.0%

Percent of Users

Hours from First Call

Sample: 47

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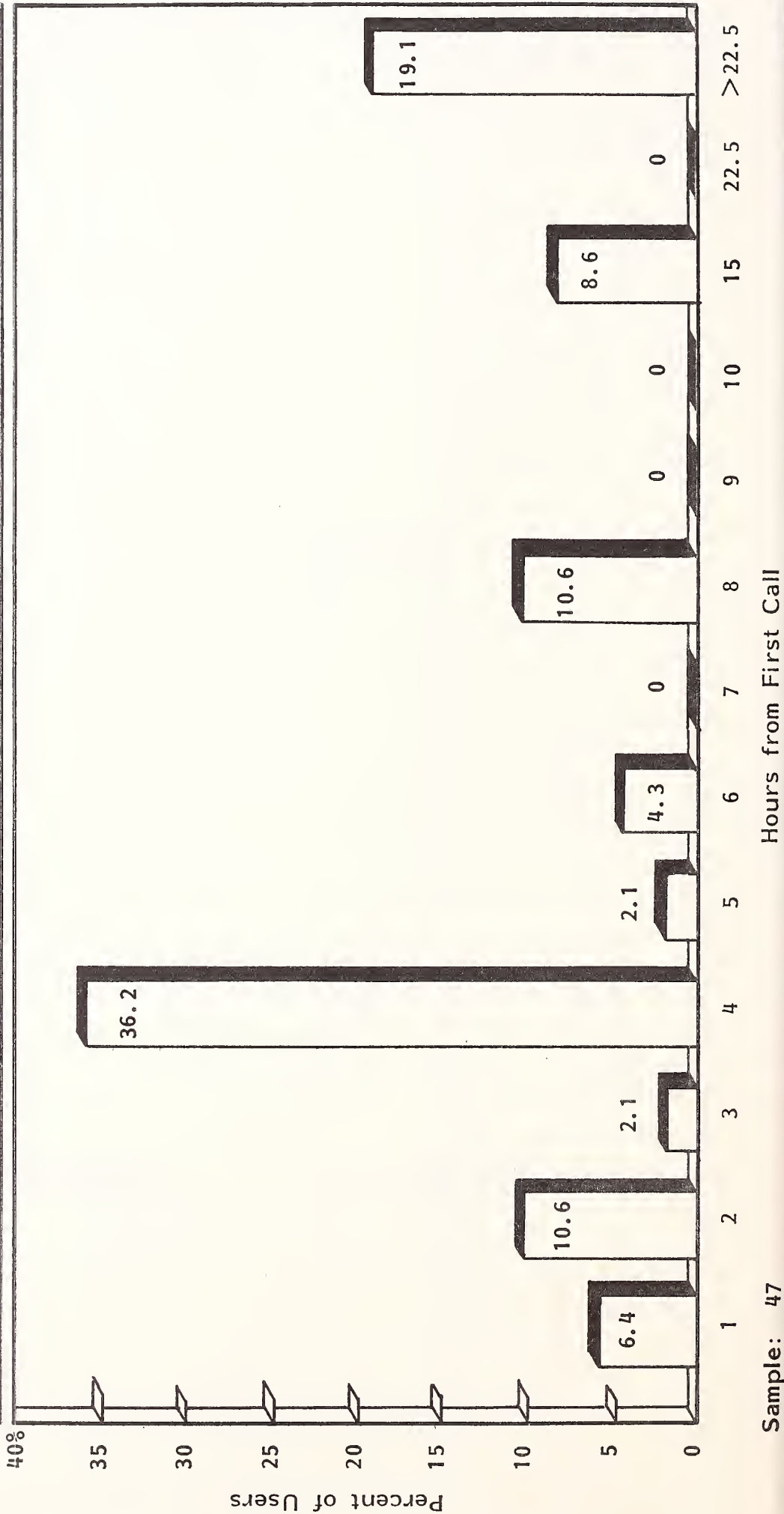
C.   FRANCE

1.   LARGE SYSTEMS

- Almost one-third of French users would like a response time of one hour or less, and over 90% want a response time of four hours or less. Although users are prepared to compromise on these stringent ideals, four hours is the limit for most users--86% would find a response longer than that unacceptable (see Exhibits III-14 and III-15).

2.   SMALL SYSTEMS

- Over 50% of French users have an ideal response time of two hours or less, with two-thirds wanting a response time under three hours. Almost 90% of users are aiming for four hours or under. Although users are prepared to tolerate longer response times--the 50% level is for three hours, not two--four hours still remains the threshold, and 81% of users would find a response time greater than four hours unacceptable (see Exhibits III-16 and III-17).

3.   PERIPHERALS AND TERMINALS

- As with many other products, four hours is the limit of the users' ideal requirement. Eighty-five percent of all users would like a response time of four hours or less, while over one-half, 53%, would like a response of under two hours. The longest acceptable time delay for response is less demanding, but 50% of users still want response within three hours, with 75% wanting response within four hours (see Exhibits III-18 and III-19).

4.   DATA COMMUNICATIONS

- Over one-half of the users would ideally like a response time of two hours or less, with a further 30% wanting a response of between three and four hours.

INPUT

EXHIBIT III-14

RESPONSE TIMES: IDEAL REQUIREMENT OF FRENCH USERS - LARGE SYSTEMS

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

	1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
	32.7%	69.1%	76.4%	90.9%	92.7%	92.7%	92.7%	94.5%	96.4%	96.4%	98.2%	98.2%	100.0%

Hours from First Call

Percent of Users

Sample: 55

- 34 -

INP
FBUR
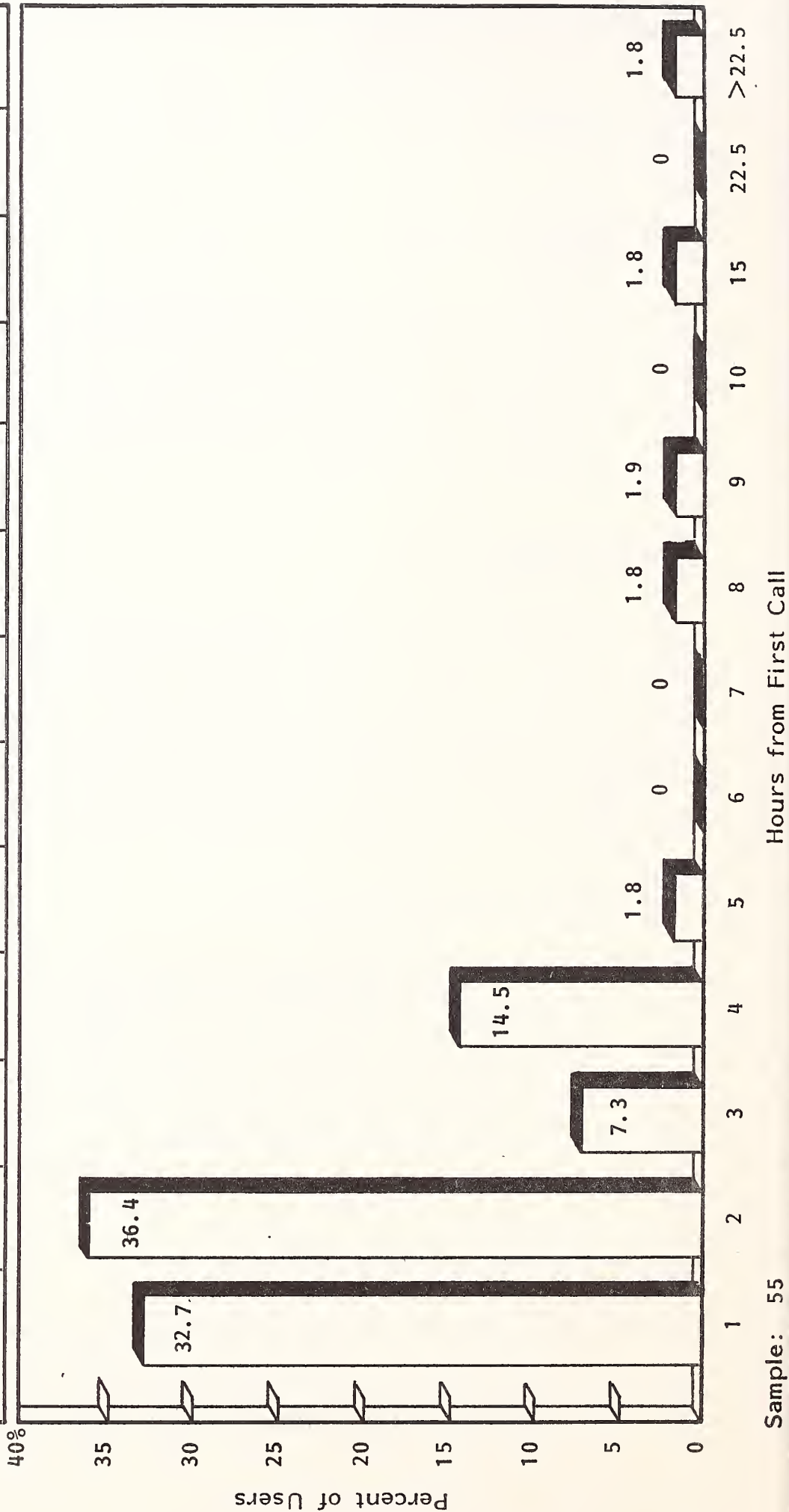
EXHIBIT III-15

RESPONSE TIME: LONGEST TIME DELAY ACCEPTABLE TO FRENCH USERS - LARGE SYSTEMS

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
25.9%	56.9%	67.2%	86.2%	86.2%	87.9%	87.9%	93.1%	93.1%	94.8%	96.6%	96.6%	100.0%

Percent of Users

Hours from First Call

25.9 — 1
31.0 — 2
10.3 — 3
19.0 — 4
0 — 5
1.7 — 6
0 — 7
5.2 — 8
0 — 9
1.7 — 10
1.8 — 15
0 — 22.5
3.4 — >22.5

Sample: 58

- 35 -

INPUT
FBUR

EXHIBIT III-16

RESPONSE TIMES: IDEAL REQUIREMENT OF FRENCH USERS - SMALL SYSTEMS

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
29.2%	59.6%	67.4%	88.8%	89.8%	92.1%	92.1%	93.3%	95.5%	95.5%	95.5%	95.5%	100.0%

Percent of Users

40%
35
30
25
20
15
10
5
0

29.2 30.4 7.8 21.4 1.0 2.3 0 1.2 2.2 0 0 0 4.5

1 2 3 4 5 6 7 8 9 10 15 22.5 >22.5

Hours from First Call

Sample: 89

- 36 -

EXHIBIT III-17

RESPONSE TIME: LONGEST TIME DELAY ACCEPTABLE TO FRENCH USERS - SMALL SYSTEMS

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
13.8%	47.5%	52.5%	81.3%	83.8%	86.3%	86.3%	92.5%	92.5%	93.8%	95.0%	95.0%	100.0%

Hours from First Call

Percent of Users

Sample: 80

- 37 -

EXHIBIT III-18

RESPONSE TIMES: IDEAL REQUIREMENT OF FRENCH USERS - PERIPHERALS AND TERMINALS

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
18.5%	53.1%	56.9%	84.6%	84.6%	84.6%	86.2%	93.8%	93.8%	93.8%	94.6%	94.6%	100.0%

Percent of Users

40%
35
30
25
20
15
10
5
0

18.5
34.6
3.8
27.7
0
0
1.5
7.7
0
0
0.8
0
5.4

1   2   3   4   5   6   7   8   9   10   15   22.5   >22.5

Hours from First Call

Sample: 130

- 38 -

INP
FBUR

EXHIBIT III-19
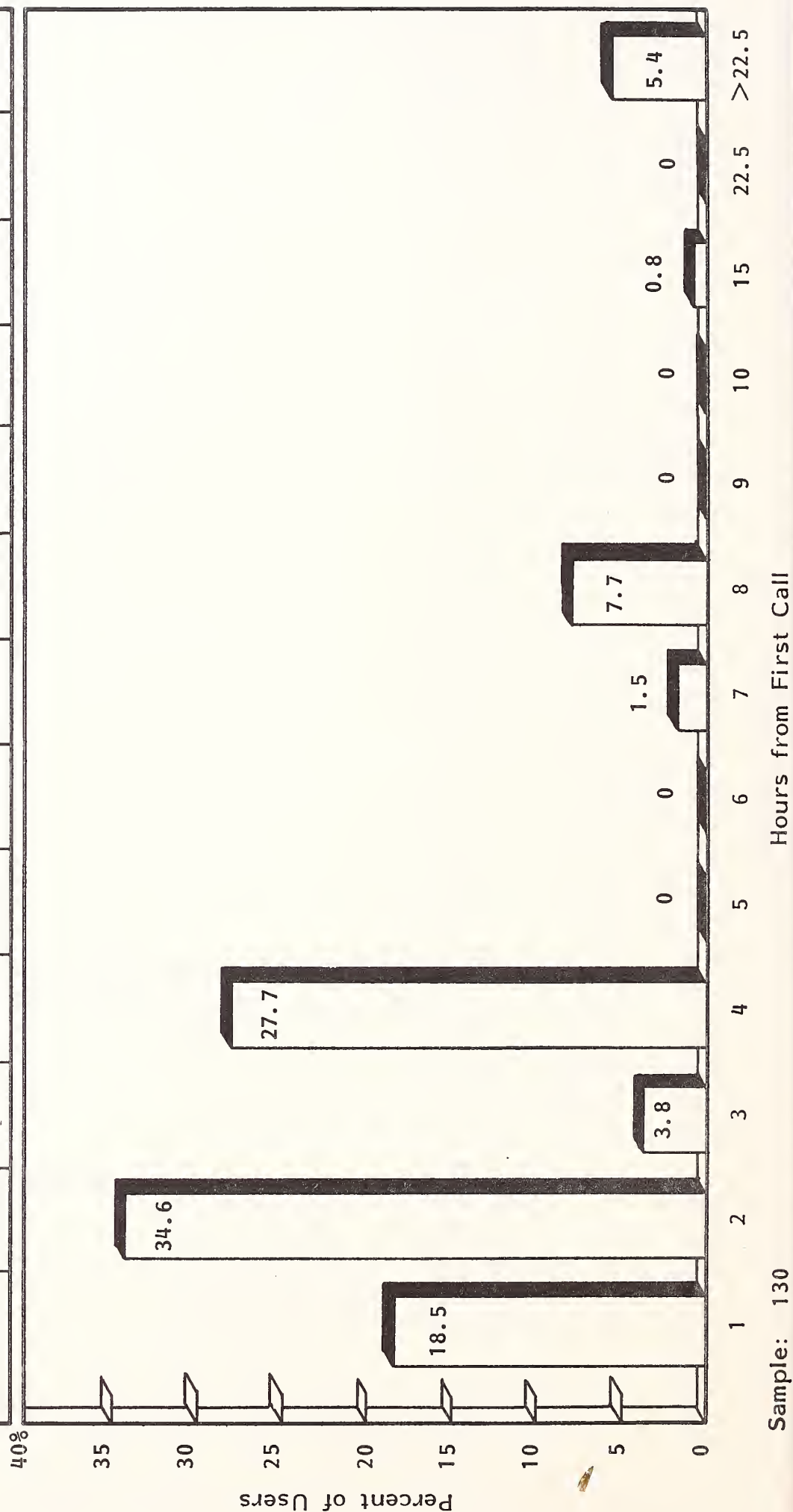
RESPONSE TIME : LONGEST TIME DELAY ACCEPTABLE TO FRENCH USERS -

PERIPHERALS AND TERMINALS

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
9.5%	45.2%	50.0%	75.4%	77.8%	79.4%	79.4%	92.1%	92.1%	92.1%	95.2%	95.2%	100.0%

Percent of Users

40%
35
30
25
20
15
10
5
0

9.5
35.7
4.8
25.4
2.4
1.6
0
12.7
0
0
3.1
0
4.8

1   2   3   4   5   6   7   8   9   10   15   22.5   >22.5

Hours from First Call

Sample: 126

- 39 -

INPUT
FBUR
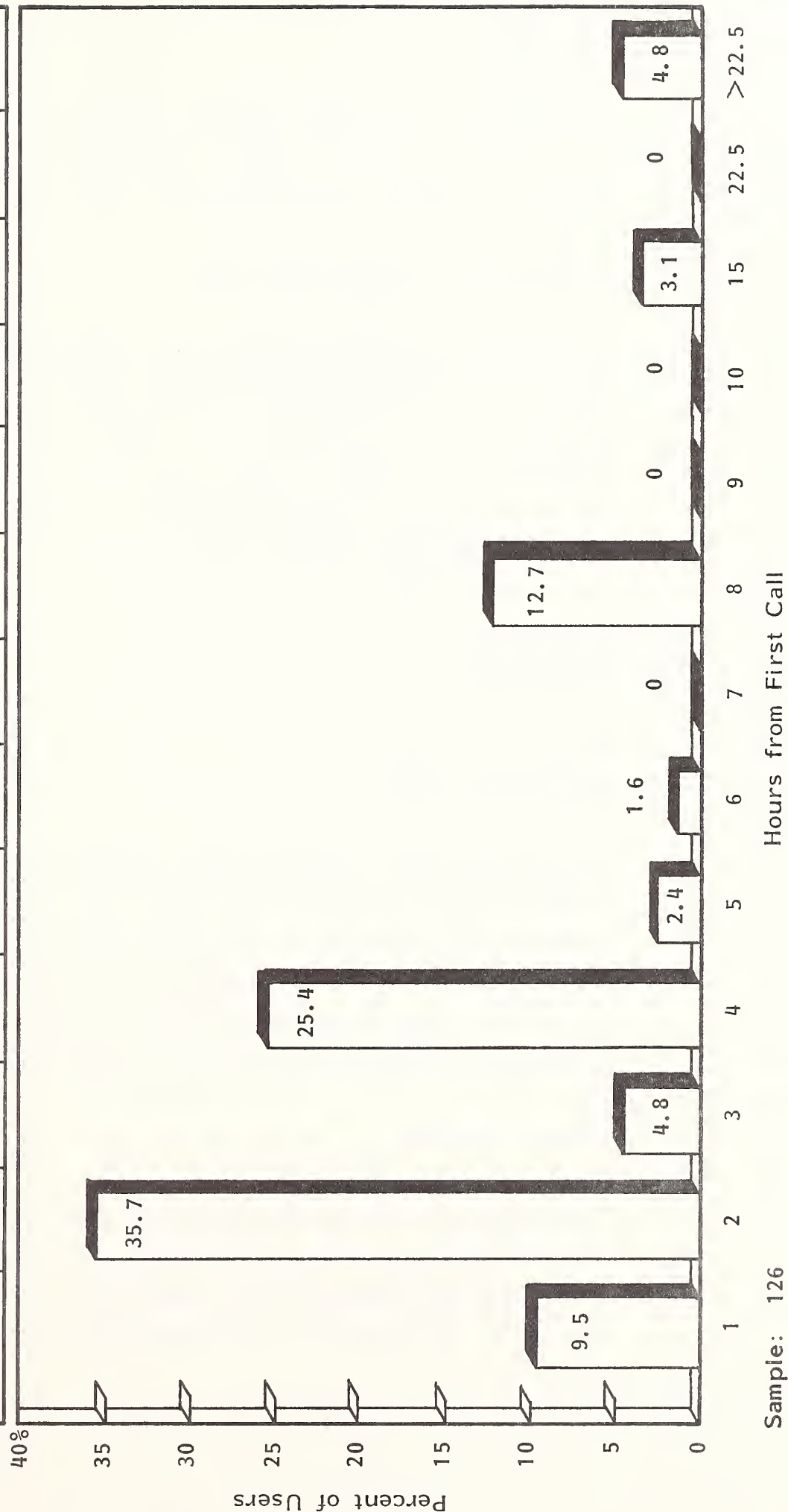
The user limit of tolerance follows a similar pattern, with two-thirds of users still wanting a response within four hours, and a further 20% wanting a response within eight hours (see Exhibits III-20 and III-21).

5. OFFICE AUTOMATION EQUIPMENT

- Even though OA equipment users have less stringent requirements than small-system users, the ideals are still around the four hour mark. Almost three-quarters of users would like a four hour or faster response time. At the tolerance level, user needs slip a little, but 60% still demand a four hour response, while a further 13% are prepared to wait a full working day--but not longer (see Exhibits III-22 and III-23).

D. GERMANY

1. LARGE SYSTEMS

- German users have extremely strict requirements, with two-thirds of them ideally wanting a response time of one hour or less, and 96% looking for a response within four hours. At worst, some users are prepared to accept a one-hour slip on their ideal response time, but 93% of all users say that four hours is the longest acceptable delay, and three-quarters will not tolerate a response time longer than two hours (see Exhibits III-24 and III-25).

2. SMALL SYSTEMS

- Fifty percent of users ideally would like a response time of one hour or less, and 79% of those users say that one hour is the longest acceptable response time. Eighty-six percent of all users demand a response time of four hours or less as the maximum they are prepared to accept (see Exhibits III-26 and III-27).

INPU

EXHIBIT III-20

RESPONSE TIMES: IDEAL REQUIREMENT OF FRENCH USERS – DATA COMMUNICATIONS EQUIPMENT

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
26.5%	53.1%	57.1%	79.6%	79.6%	79.6%	79.6%	91.8%	91.8%	91.8%	91.8%	91.8%	100.0%

Sample: 49

INPUT
FBUR

EXHIBIT III-21

RESPONSE TIME: LONGEST TIME DELAY ACCEPTABLE TO FRENCH USERS -

DATA COMMUNICATIONS EQUIPMENT

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

	1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
	12.8%	40.4%	48.9%	66.0%	68.1%	68.1%	68.1%	85.1%	85.1%	85.1%	89.4%	89.4%	100.0%

Percent of Users

Hours from First Call

Sample: 47

INP
FBUR
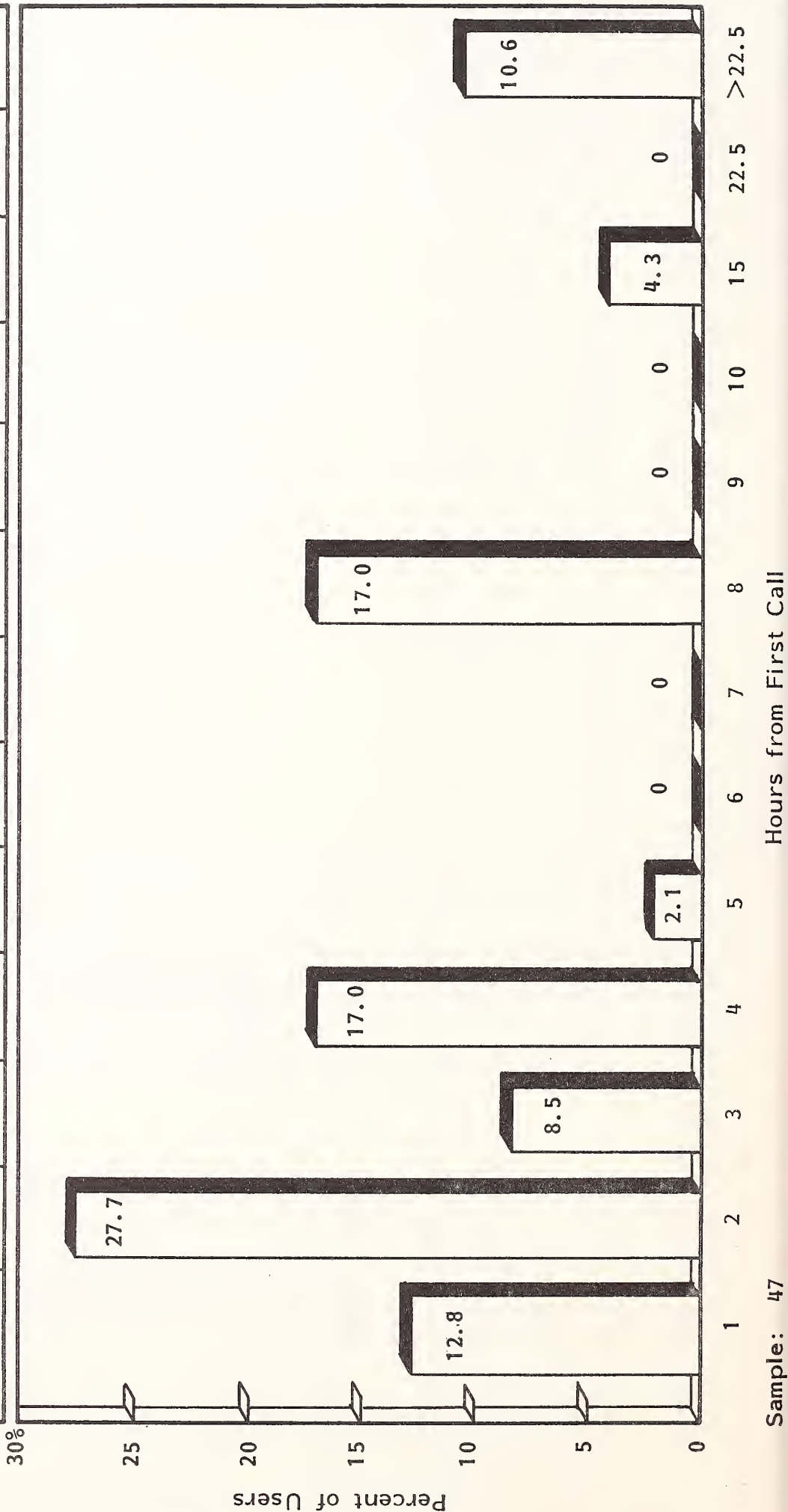
EXHIBIT III-22

RESPONSE TIMES: IDEAL REQUIREMENT OF FRENCH USERS - OFFICE AUTOMATION EQUIPMENT

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
3.6%	33.9%	37.5%	73.2%	75.0%	80.4%	80.4%	87.5%	89.3%	89.3%	89.3%	89.3%	100.0%

Percent of Users

Hours from First Call

Sample: 56

INPUT
FBUR
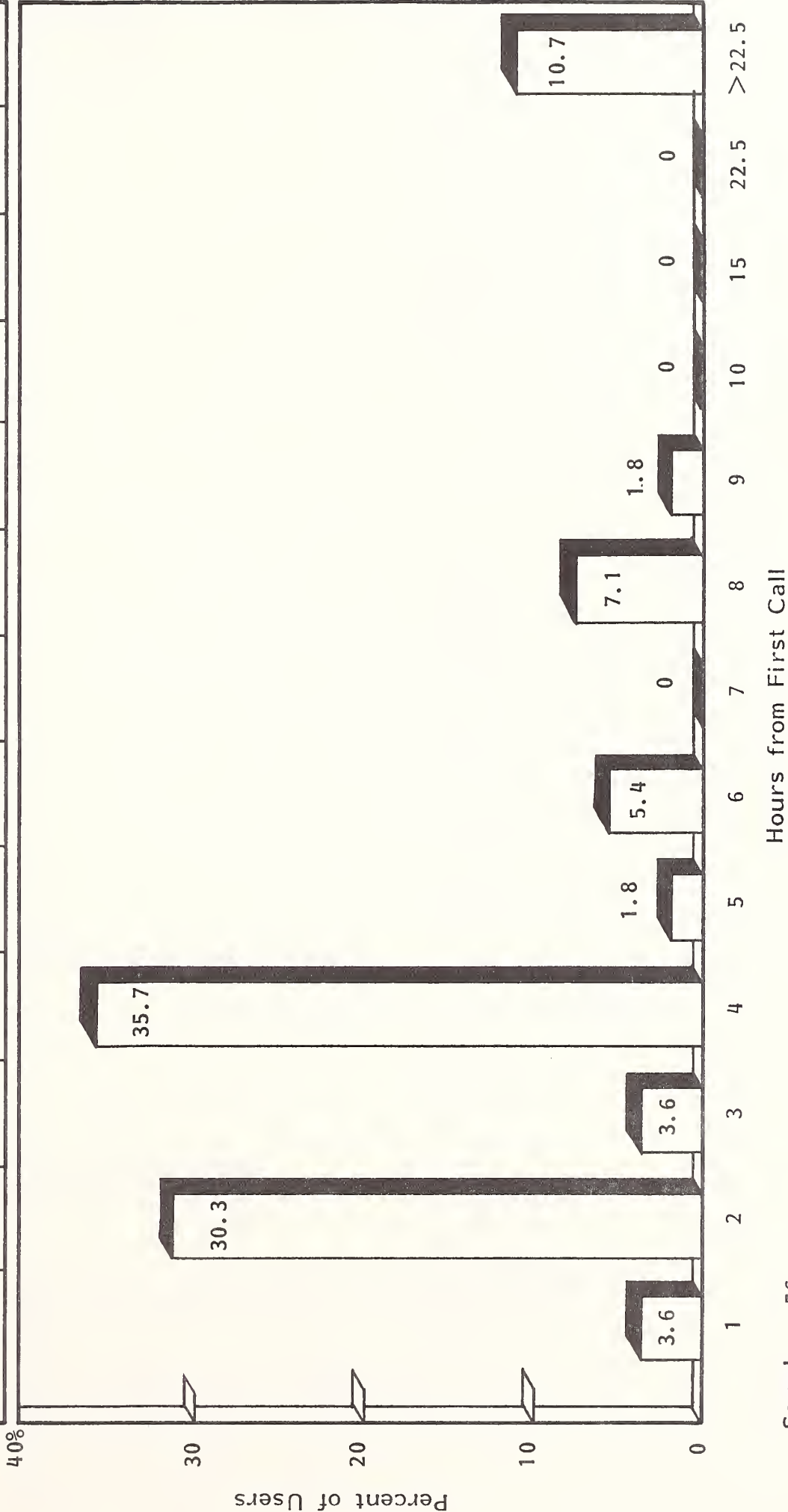
EXHIBIT III-23

RESPONSE TIME: LONGEST TIME DELAY ACCEPTABLE TO FRENCH USERS –

OFFICE AUTOMATION EQUIPMENT

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

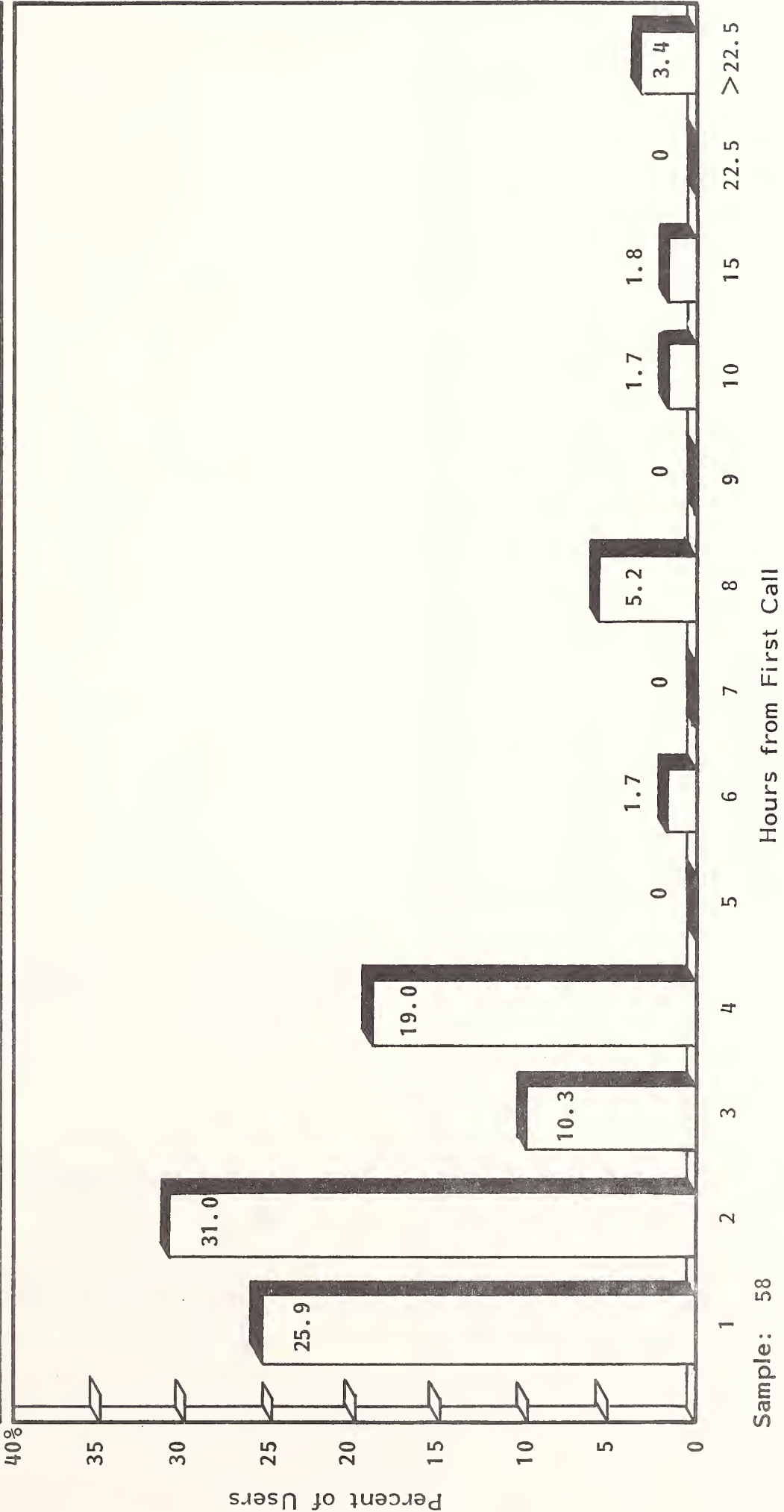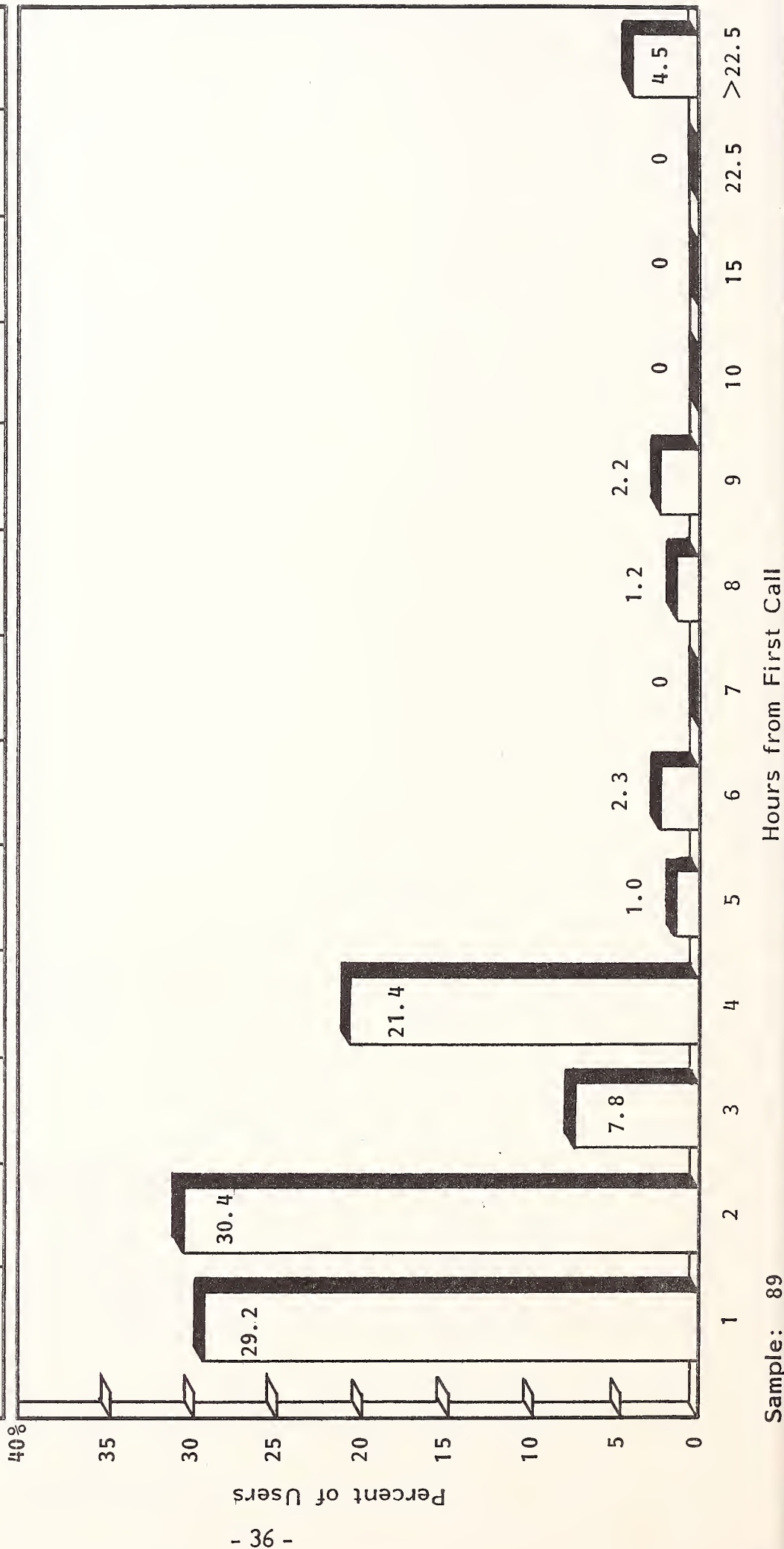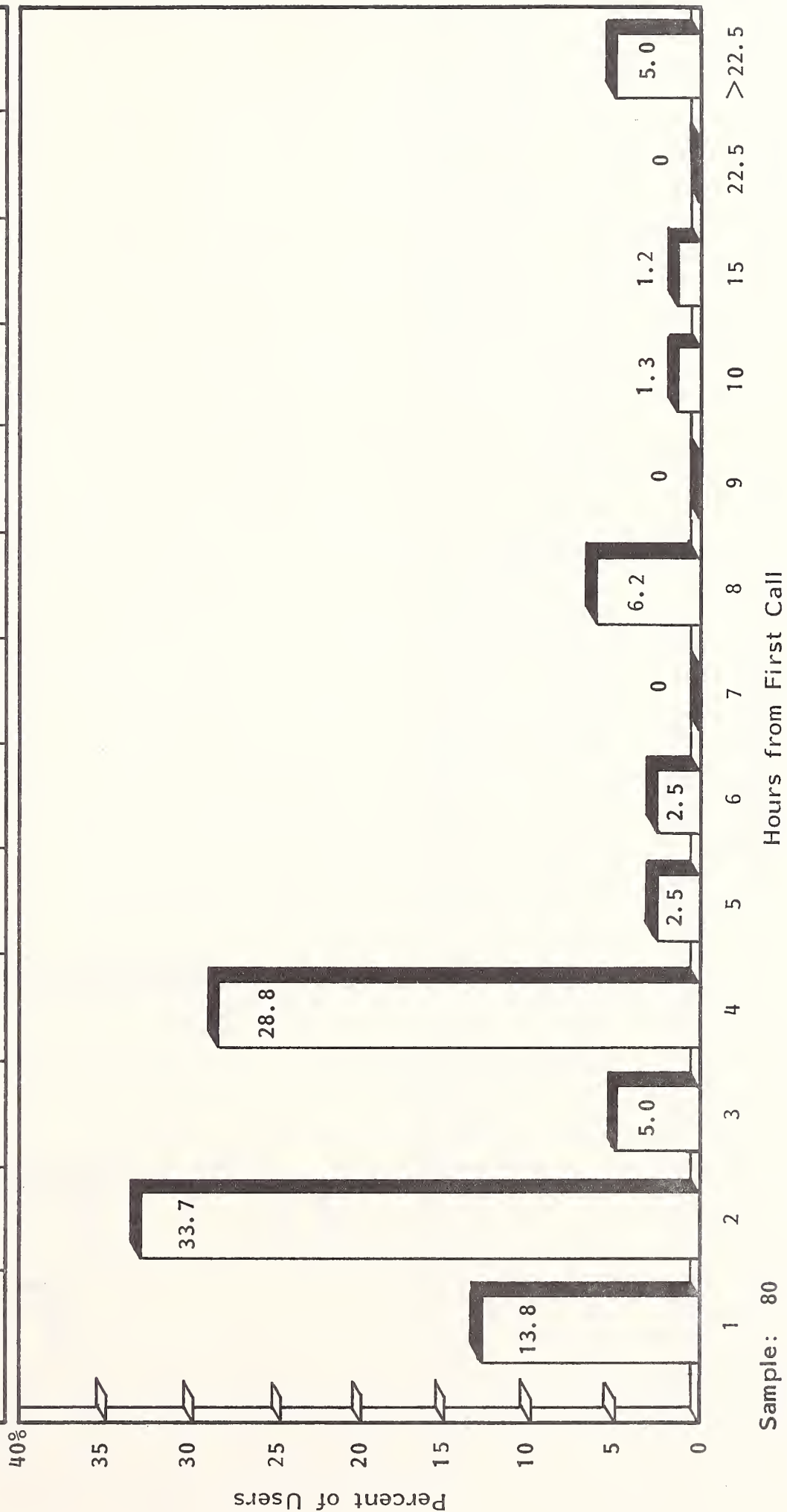| 1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
1.9%	26.9%	28.8%	59.6%	61.5%	63.5%	63.5%	73.1%	73.1%	73.1%	80.8%	80.8%	100.0%

Sample: 52

- 44 -

INP
FBUR

EXHIBIT III-24

RESPONSE TIMES: IDEAL REQUIREMENT OF GERMAN USERS - LARGE SYSTEMS

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
67.7%	85.4%	89.6%	95.8%	95.8%	96.9%	96.9%	96.9%	96.9%	96.9%	97.9%	97.9%	100.0%

Percent of Users

Hours from First Call

Sample: 96

EXHIBIT III-25

RESPONSE TIME: LONGEST TIME DELAY ACCEPTABLE TO GERMAN USERS - LARGE SYSTEMS

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
57.1%	76.5%	83.7%	92.9%	93.9%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	100.0%

Sample: 96

INP
FBUR

EXHIBIT III-26

RESPONSE TIMES: IDEAL REQUIREMENT OF GERMAN USERS - SMALL SYSTEMS

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
50.0%	68.4%	81.6%	92.1%	94.7%	94.7%	94.7%	94.7%	97.4%	97.4%	100.0%	100.0%	100.0%

Percent of Users (vertical axis)

Bar chart values by Hours from First Call:
- 1: 50.0
- 2: 18.4
- 3: 13.2
- 4: 10.5
- 5: 2.6
- 6: 0
- 7: 0
- 8: 0
- 9: 2.6
- 10: 0
- 15: 2.6
- 22.5: 0
- >22.5: 0

Hours from First Call

Sample: 38

INPUT
FBUR

EXHIBIT III-27
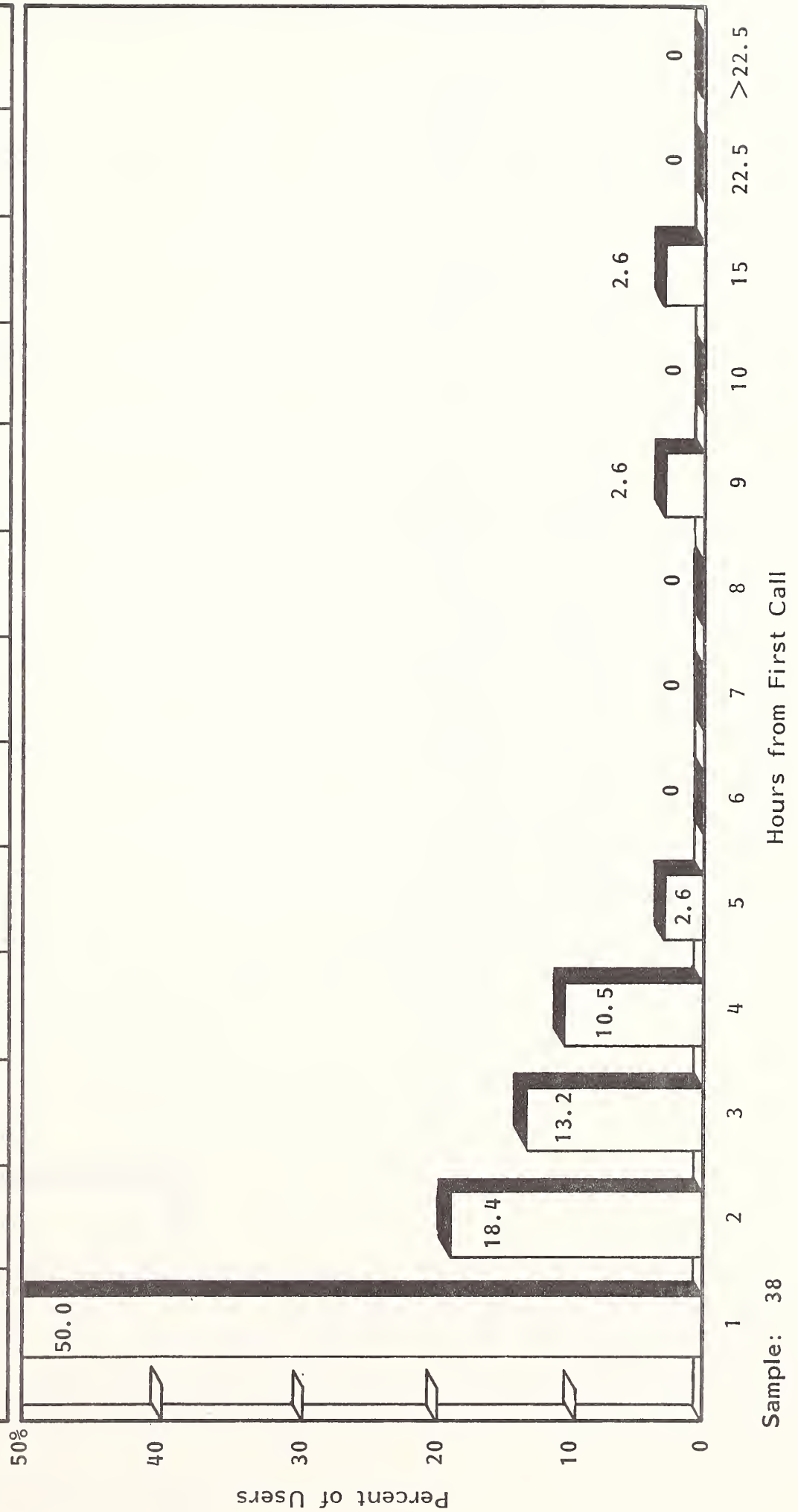
RESPONSE TIME: LONGEST TIME DELAY ACCEPTABLE TO GERMAN USERS - SMALL SYSTEMS

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
41.7%	69.4%	72.2%	86.1%	91.7%	91.7%	91.7%	94.4%	97.2%	97.2%	100.0%	100.0%	100.0%

Percent of Users

45%
40
35
30
25
20
15
10
5
0

41.7   27.8   2.8   13.9   5.6   0   0   2.8   2.8   0   2.8   0   0

1   2   3   4   5   6   7   8   9   10   15   22.5   >22.5

Hours from First Call

Sample: 36

INP
FBUR
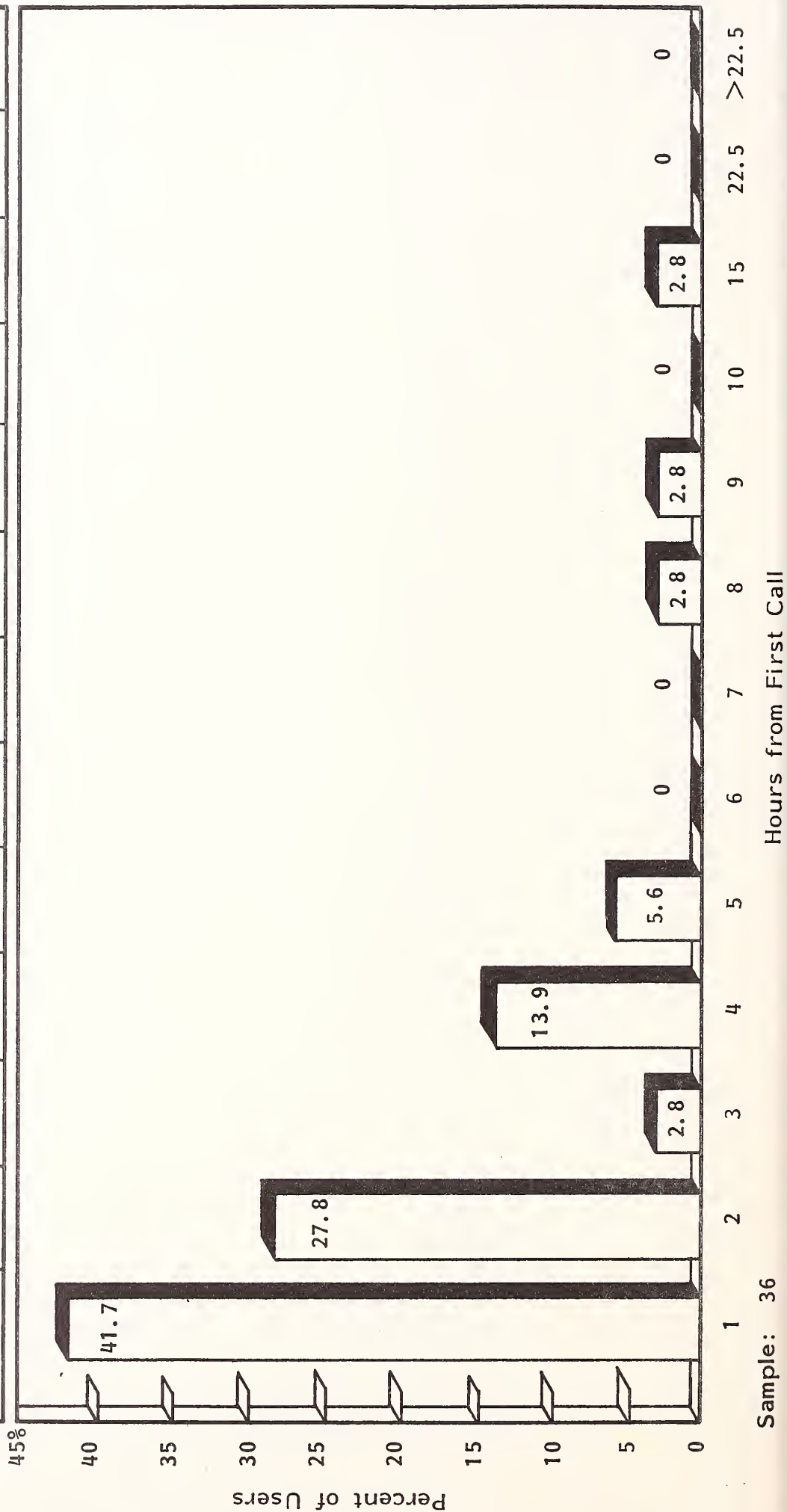
3. PERIPHERALS AND TERMINALS

- Here again, over 50% of users (56% in fact) would like a response time of less than one hour. There is only a slight difference between this ideal and the longest acceptable response time, where around 50% of users still demand a one hour response (see Exhibits III-28 and III-29).

4. DATA COMMUNICATIONS EQUIPMENT

- Once again, ideal requirements are extremely tight, with over 60% of users wanting a one hour response and a further 15%, 78% in all, aiming for two hours or less. For 70% of users, two hours is the longest acceptable response time. The gap between the ideal response time and the longest acceptable response time is quite narrow in Germany (see Exhibits III-30 and III-31).

5. OFFICE AUTOMATION EQUIPMENT

- Almost one-half of the users of OA equipment in Germany would like a response time of one hour or less, and 82% are looking for a response of less than four hours. As can be seen from Exhibits III-32 and III-33, there is little difference between the German users' ideal requirement and the longest delay they are prepared to accept. In both cases, 61% of users demand a response time of two hours or less.

E. ITALY

1. SYSTEMS (LARGE AND SMALL)

- Italian users are rather less demanding than others, with only 53% of them having an ideal response time of three hours or less. Still, an additional 28%

INPUT

EXHIBIT III-28

RESPONSE TIMES: IDEAL REQUIREMENT OF GERMAN USERS - PERIPHERALS AND TERMINALS

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
56.0%	72.5%	78.9%	85.3%	89.9%	91.7%	91.7%	95.4%	95.4%	95.4%	98.2%	98.2%	100.0%

Sample: 109

INP
FBUR

EXHIBIT III-29

RESPONSE TIME: LONGEST TIME DELAY ACCEPTABLE TO GERMAN USERS -

PERIPHERALS AND TERMINALS

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
49.5%	71.8%	80.6%	86.4%	89.3%	91.3%	91.3%	94.2%	94.2%	94.2%	97.1%	97.1%	100.0%

Percent of Users

Hours from First Call
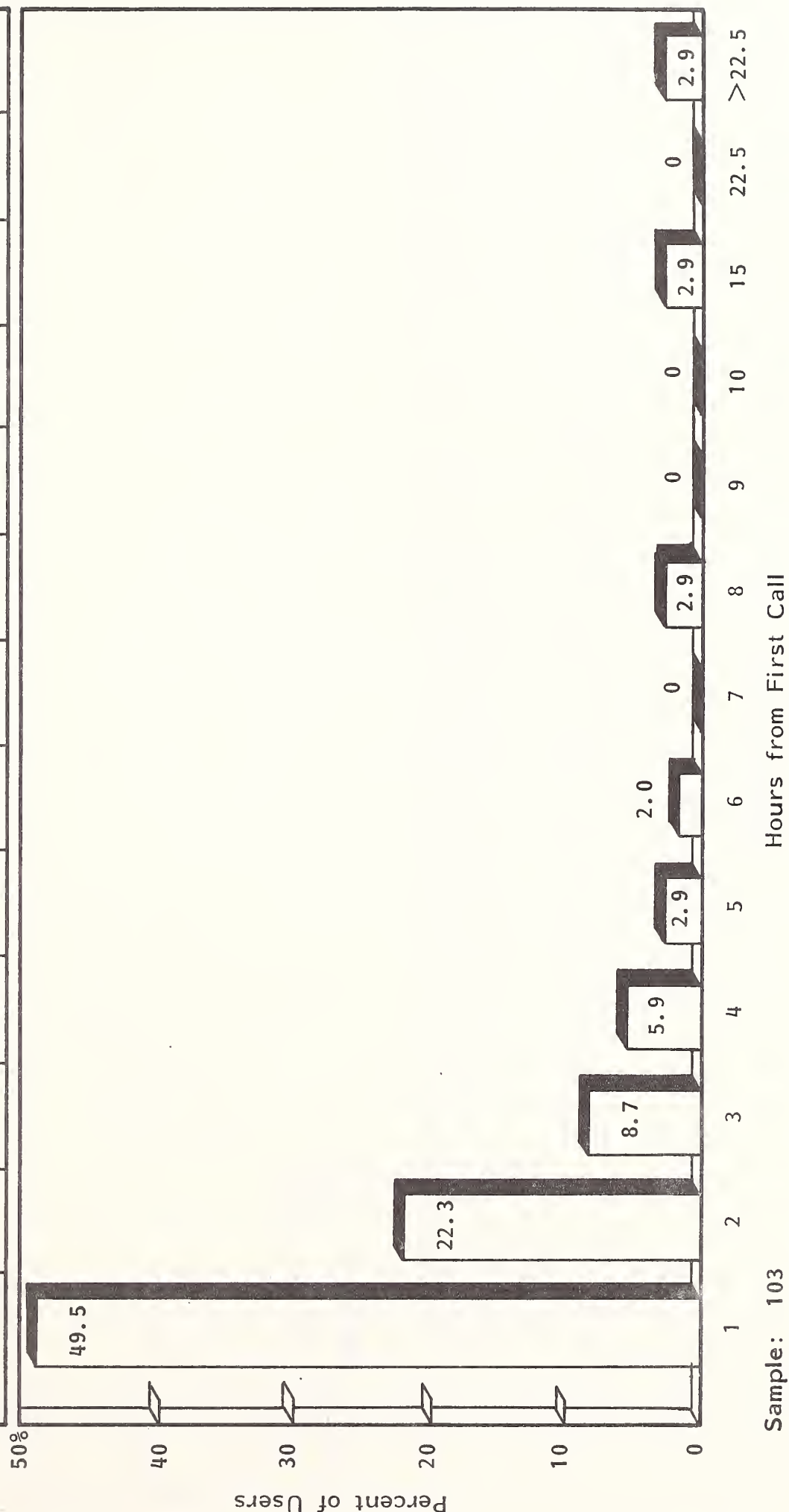
Sample: 103

EXHIBIT III-30

RESPONSE TIMES: IDEAL REQUIREMENT OF GERMAN USERS -

DATA COMMUNICATIONS EQUIPMENT

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
62.5%	78.1%	81.3%	84.4%	84.4%	84.4%	84.4%	84.4%	90.6%	90.6%	96.9%	96.9%	100.0%

Percent of Users

Hours from First Call

Sample: 32

INPU
FBUR

EXHIBIT III-31
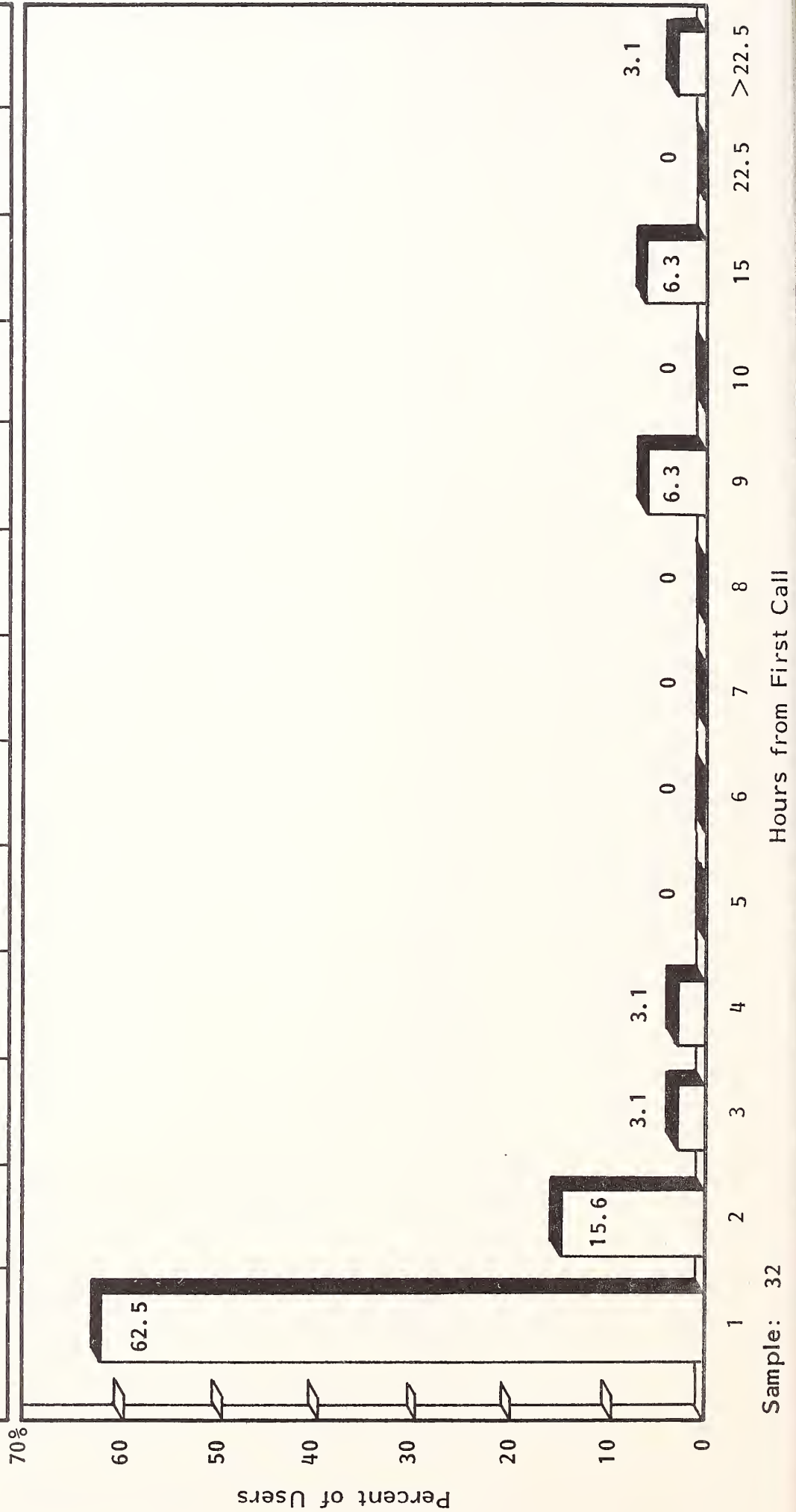
RESPONSE TIME: LONGEST TIME DELAY ACCEPTABLE TO GERMAN USERS -

DATA COMMUNICATIONS EQUIPMENT

	1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
CUMULATIVE PERCENTAGE OF USERS (Hours from Call)	40.0%	70.0%	80.0%	86.7%	86.7%	86.7%	86.7%	86.7%	86.7%	86.7%	93.3%	93.3%	100.0%

Percent of Users

40.0

30.0

10.0

6.7

0   0   0   0   0

6.6

0

6.7

1   2   3   4   5   6   7   8   9   10   15   22.5   >22.5

Hours from First Call

Sample: 32

- 53 -

INPUT
FBUR

EXHIBIT III-32

RESPONSE TIMES: IDEAL REQUIREMENT OF GERMAN USERS – OFFICE AUTOMATION EQUIPMENT

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
45.5%	60.6%	69.7%	81.8%	81.8%	81.8%	81.8%	87.9%	87.9%	87.9%	90.9%	90.9%	100.0%

Percent of Users

45.5

15.2

9.1

12.1

0

0

0

6.0

0

0

3.0

0

9.1

Hours from First Call

Sample: 33

- 54 -

INPU
FBUR

EXHIBIT III-33

RESPONSE TIME: LONGEST TIME DELAY ACCEPTABLE TO GERMAN USERS -

OFFICE AUTOMATION EQUIPMENT

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
39.4%	60.6%	66.7%	81.8%	81.8%	81.8%	81.8%	87.9%	87.9%	87.9%	90.9%	90.9%	100.0%

Sample: 33

INPUT
FBUR

would like a four hour response, so, in fact, 81% of all Italian users would ideally like a four hour or shorter response time. At the tolerance level, the longest acceptable response time for Italian users is even longer. Only 62.5% of users demand less than four hours (see Exhibits III-34 and III-35).

2.   PERIPHERALS AND TERMINALS

● Almost one-quarter of Italian users would like a one hour response time, and two-thirds of the users would like a response of four hours or better. Looking at the longest acceptable time shows a different picture, with less than one-half of the users asking for such a a fast response time (see Exhibits III-36 and III-37).

F.   BENELUX

1.   SYSTEMS (LARGE AND SMALL)

● One-third of users in Benelux would like a one hour response, with a further one-third aiming for a response within two hours. Over 90% of all users would like the response to be four hours or less (see Exhibit III-38). The users are prepared to show some tolerance, however, and only one-quarter demand a one hour response as the longest acceptable response. Ten percent of users who would ideally like a four hour response are prepared to tolerate an eight hour delay (see Exhibit III-39).

2.   PERIPHERALS AND TERMINALS

● User requirements are slightly less onerous than for sytems, but almost one-third of the users would still like a one hour response, with a further 25% looking for action within two hours. Over 80% of users would like the response to be within four hours (see Exhibit III-40). The user 'threshold of

INPU

EXHIBIT III-34

RESPONSE TIMES: IDEAL REQUIREMENT OF ITALIAN USERS - LARGE AND SMALL SYSTEMS

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
46.9%	53.1%	53.1%	81.3%	84.4%	84.4%	84.4%	87.5%	90.6%	90.6%	93.8%	93.8%	100.0%

Percent of Users

Hours from First Call

Sample: 32

INPUT
FBUR

EXHIBIT III-35

RESPONSE TIME: LONGEST TIME DELAY ACCEPTABLE TO ITALIAN USERS –

LARGE AND SMALL SYSTEMS

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
18.8%	34.4%	43.8%	62.5%	62.5%	65.6%	65.6%	81.3%	81.3%	81.3%	84.4%	84.4%	100.0%

Sample: 32

INPUT
FBUR

EXHIBIT III-36

RESPONSE TIMES: IDEAL REQUIREMENT OF ITALIAN USERS – PERIPHERALS AND TERMINALS

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

	1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
	23.1%	41.0%	46.2%	66.7%	69.2%	69.2%	69.2%	79.5%	82.1%	82.1%	87.2%	87.2%	100.0%

Hours from First Call

Percent of Users

Sample: 39

- 59 -

INPUT
FBUR

EXHIBIT III-37

RESPONSE TIME: LONGEST TIME DELAY ACCEPTABLE TO ITALIAN USERS – PERIPHERALS AND TERMINALS

	1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
CUMULATIVE PERCENTAGE OF USERS (Hours from Call)	12.8%	20.5%	25.6%	48.7%	51.3%	59.0%	59.0%	76.9%	76.9%	76.9%	84.6%	84.6%	100.0%

Percent of Users

25%

20

15

10

5

0

12.8   7.7   5.1   23.1   2.6   7.7   0   17.9   0   0   7.7   0   15.4

1   2   3   4   5   6   7   8   9   10   15   22.5   >22.5

Hours from First Call

Sample: 39

- 60 -

INP
FBUR

EXHIBIT III-38

RESPONSE TIMES: IDEAL REQUIREMENT OF BENELUX USERS - LARGE AND SMALL SYSTEMS

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

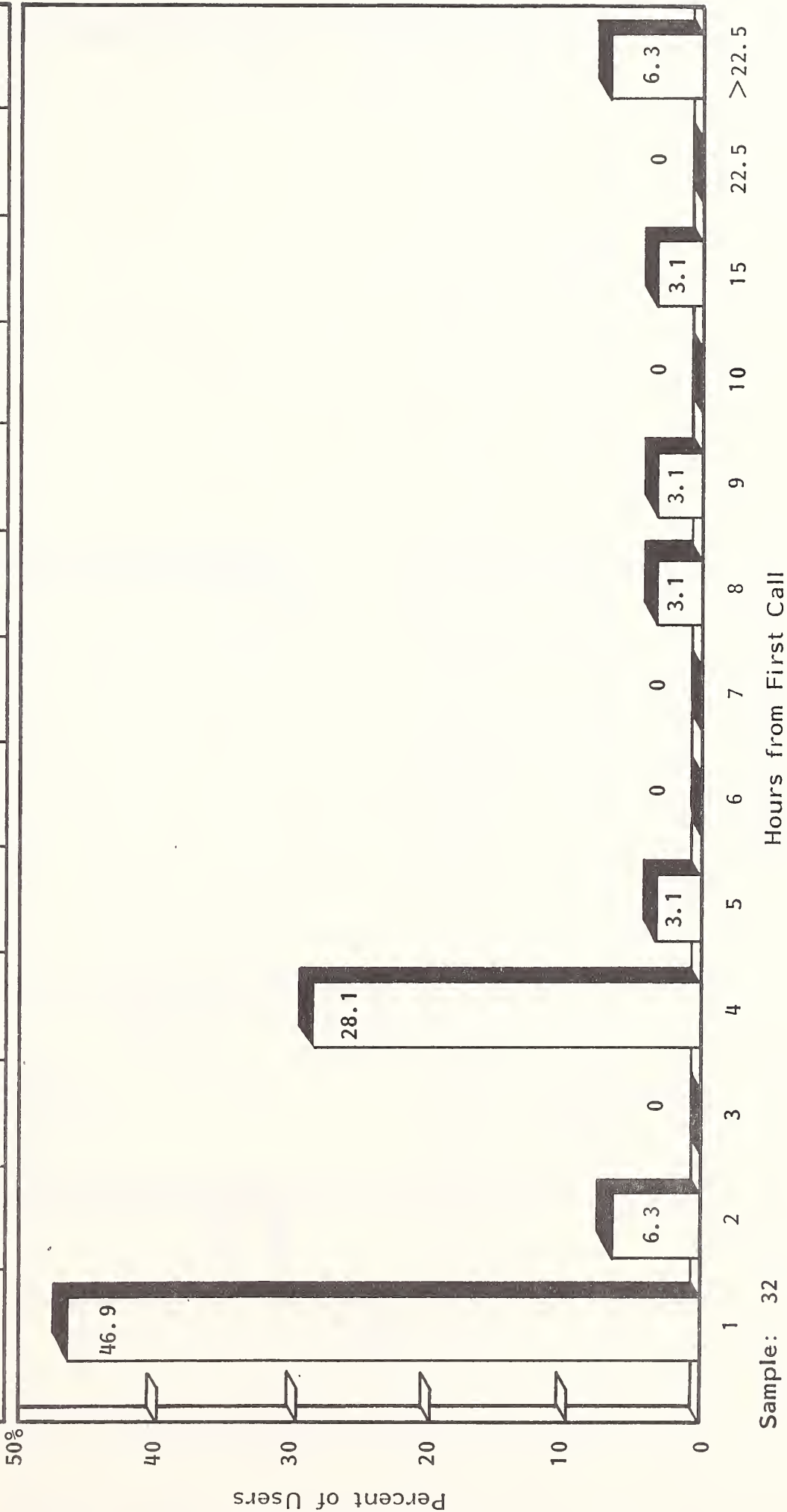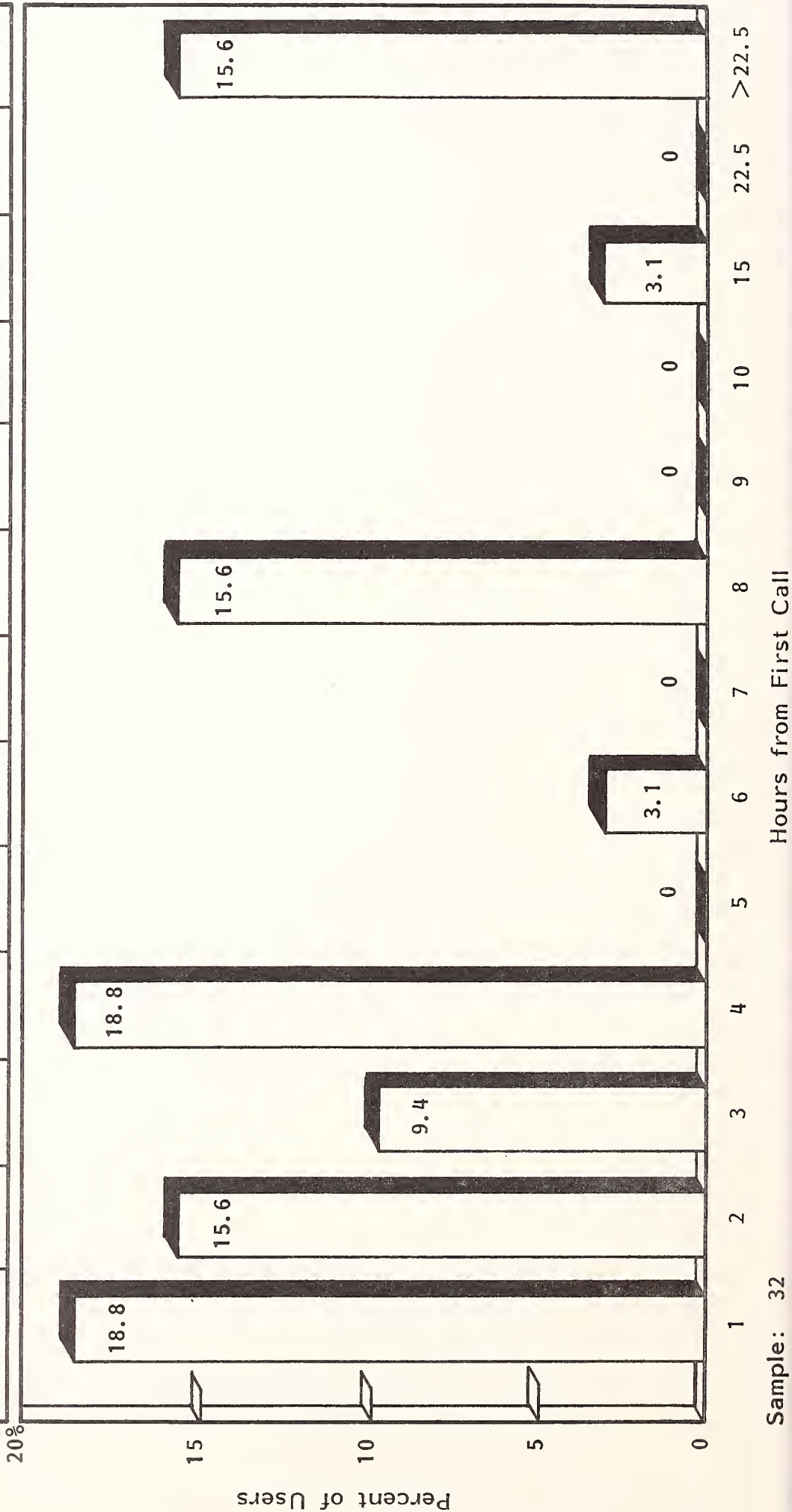| 1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
33.3%	66.7%	70.6%	90.2%	90.2%	90.2%	90.2%	94.1%	94.1%	94.1%	94.1%	94.1%	100.0%

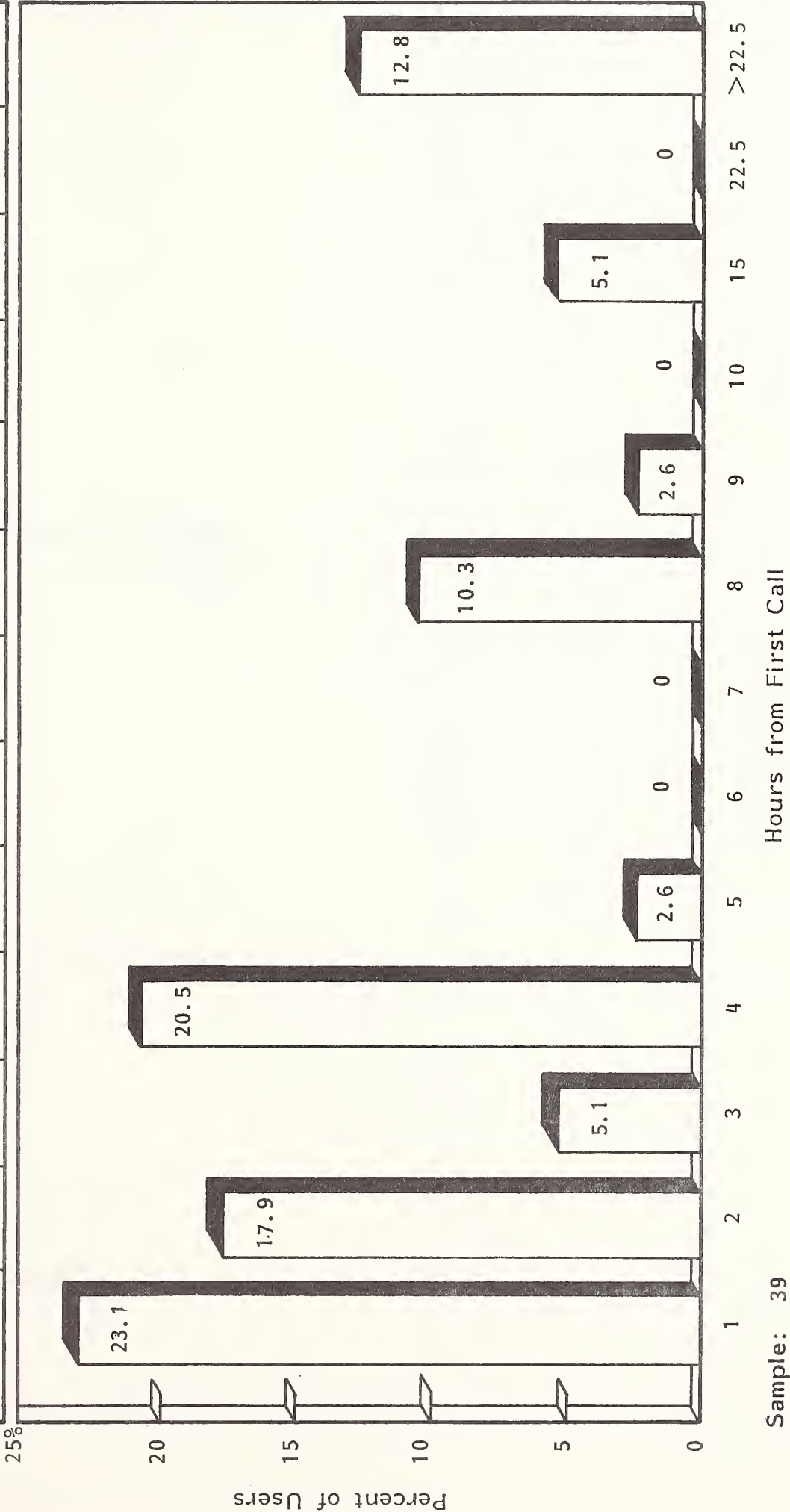Sample: 51

INPUT
FBUR

EXHIBIT III-39

RESPONSE TIME: LONGEST TIME DELAY ACCEPTABLE TO BENELUX USERS -

LARGE AND SMALL SYSTEMS

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

	1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
	24.5%	58.5%	69.8%	81.1%	81.1%	86.8%	86.8%	94.3%	94.3%	94.3%	94.3%	94.3%	100.0%
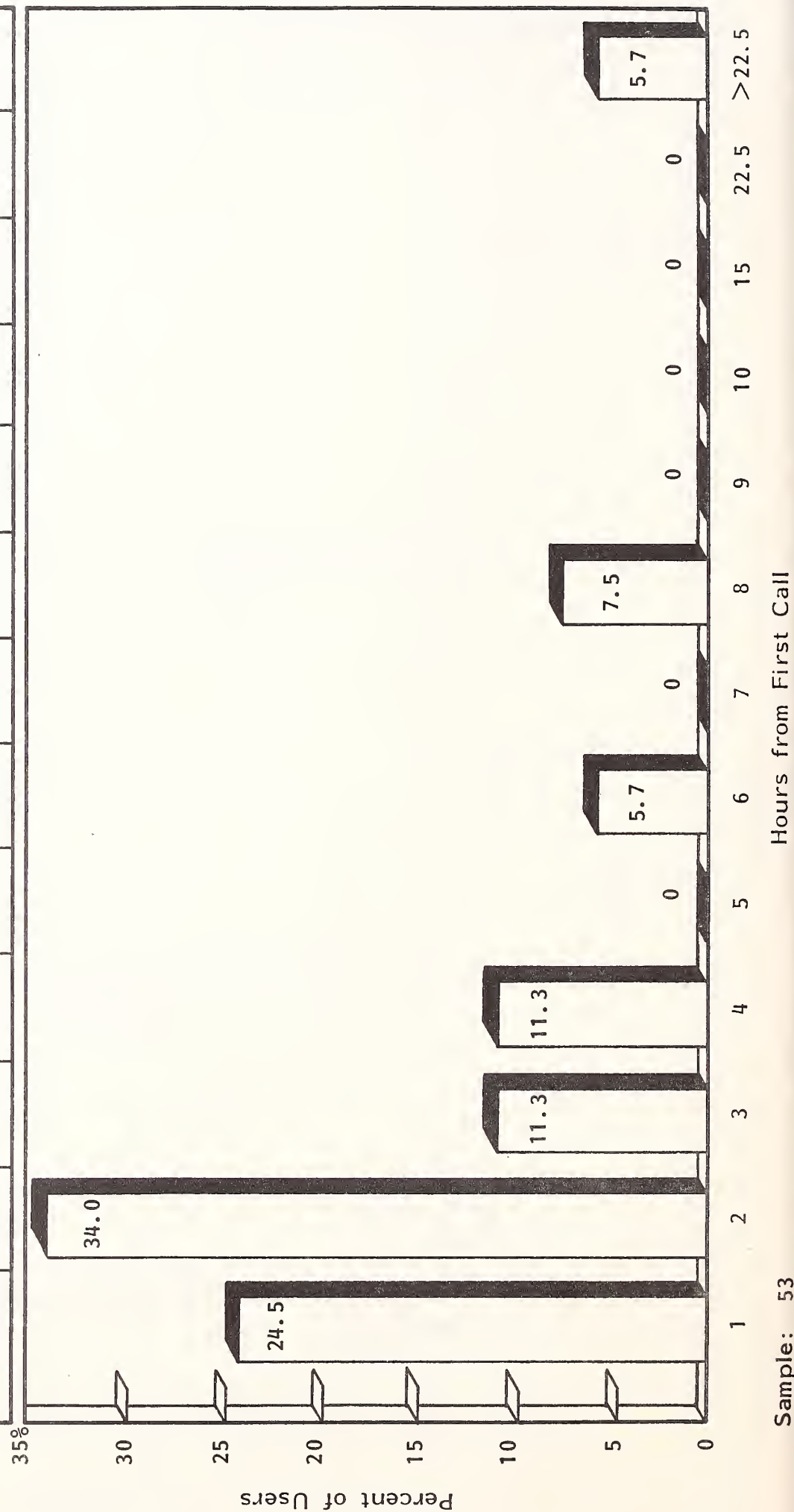
Percent of Users

Hours from First Call

Sample: 53

INPI
FBUR

EXHIBIT III-40

RESPONSE TIMES: IDEAL REQUIREMENT OF BENELUX USERS - PERIPHERALS AND TERMINALS

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
32.7%	57.1%	61.2%	81.6%	81.6%	83.7%	83.7%	95.9%	95.9%	95.9%	95.9%	95.9%	100.0%

Sample: 49

- 63 -

INPUT
FBUR

pain' is more relaxed, although 16% require a one hour response, and 25% a two hour response. Twelve percent of users are, however, prepared to accept a response time of eight hours (see Exhibit III-41).

G.   SCANDINAVIA

I.   SYSTEMS (LARGE AND SMALL)

● Most users, 61.5%, would ideally like a one hour response, with four hours the next most popular choice by another 15% of users. Over 90% of users would like a response time of four hours or less. A very high proportion of those users regarding one hour as the ideal response time also view one hour as the longest acceptable delay. Most users will tolerate a response one hour longer than their ideal (see Exhibits III-42 and III-43).

2.   PERIPHERALS AND TERMINALS

● A one hour response is the ideal for most users--44% in fact. A three hour response is the next most popular requirement, followed by eight hours specified by 12.5% of users. Three-quarters of all users would like a response time of four hours or less. Those users ideally seeking a response of one or two hours regard that as the longest acceptable time. Most of those wanting a three hour response will accept a four hour response. Beyond that time, most users will tolerate a response of three working days (see Exhibits III-44 and III-45).

- 64 -

EXHIBIT III-41

RESPONSE TIME: LONGEST TIME DELAY ACCEPTABLE TO BENELUX USERS –

PERIPHERALS AND TERMINALS

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
16.3%	40.8%	53.1%	69.4%	69.5%	75.5%	75.5%	87.8%	87.8%	87.8%	89.8%	91.8%	100.0%

Percent of Users

Hours from First Call

Sample: 49

INPUT
FBUR
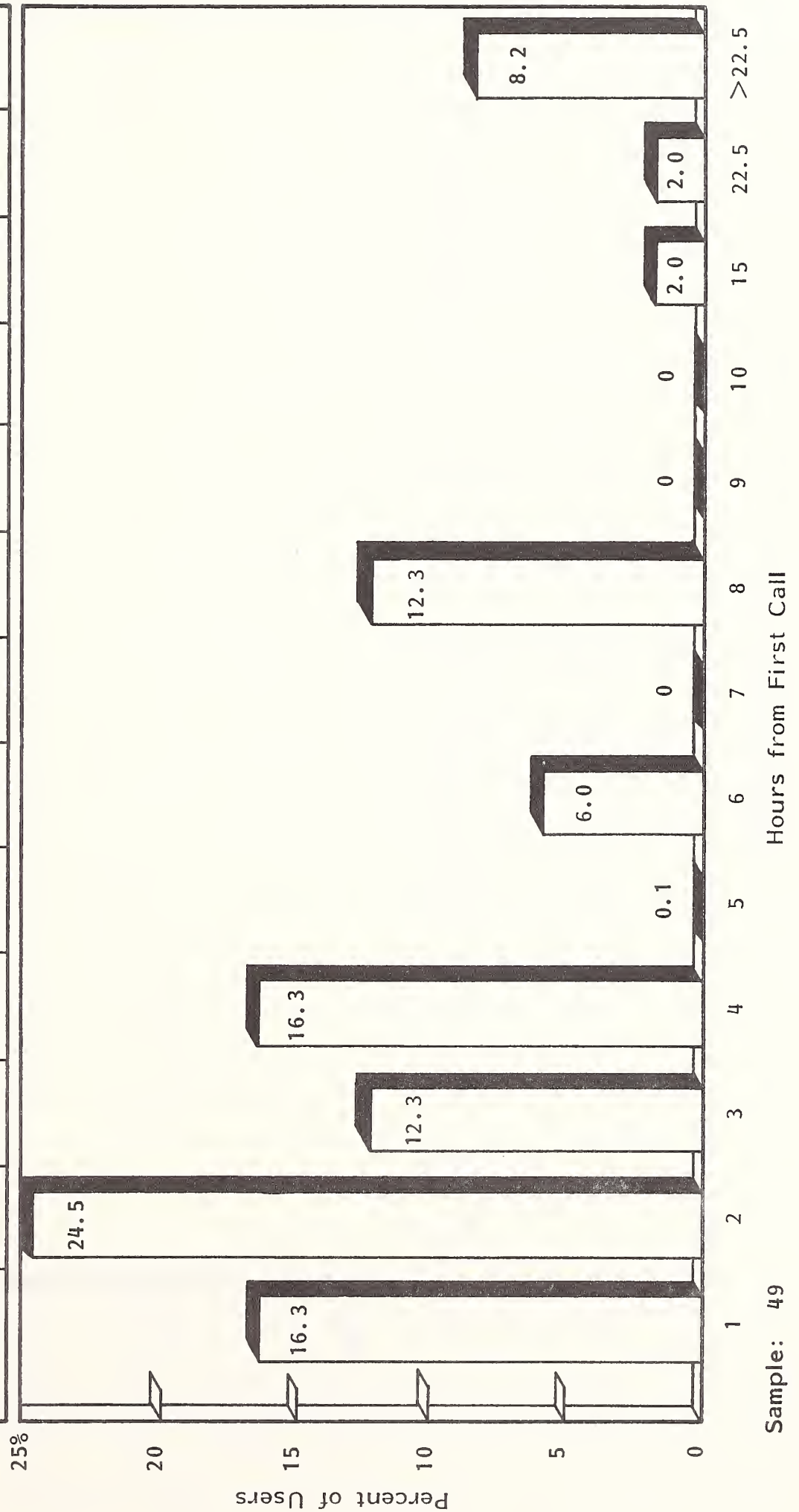
EXHIBIT III-42

RESPONSE TIMES: IDEAL REQUIREMENT OF SCANDINAVIAN USERS – LARGE AND SMALL SYSTEMS

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
61.5%	69.2%	76.9%	92.3%	92.3%	92.3%	92.3%	92.3%	92.3%	92.3%	92.3%	92.3%	100.0%

Sample: 13

INPUT
FBUR
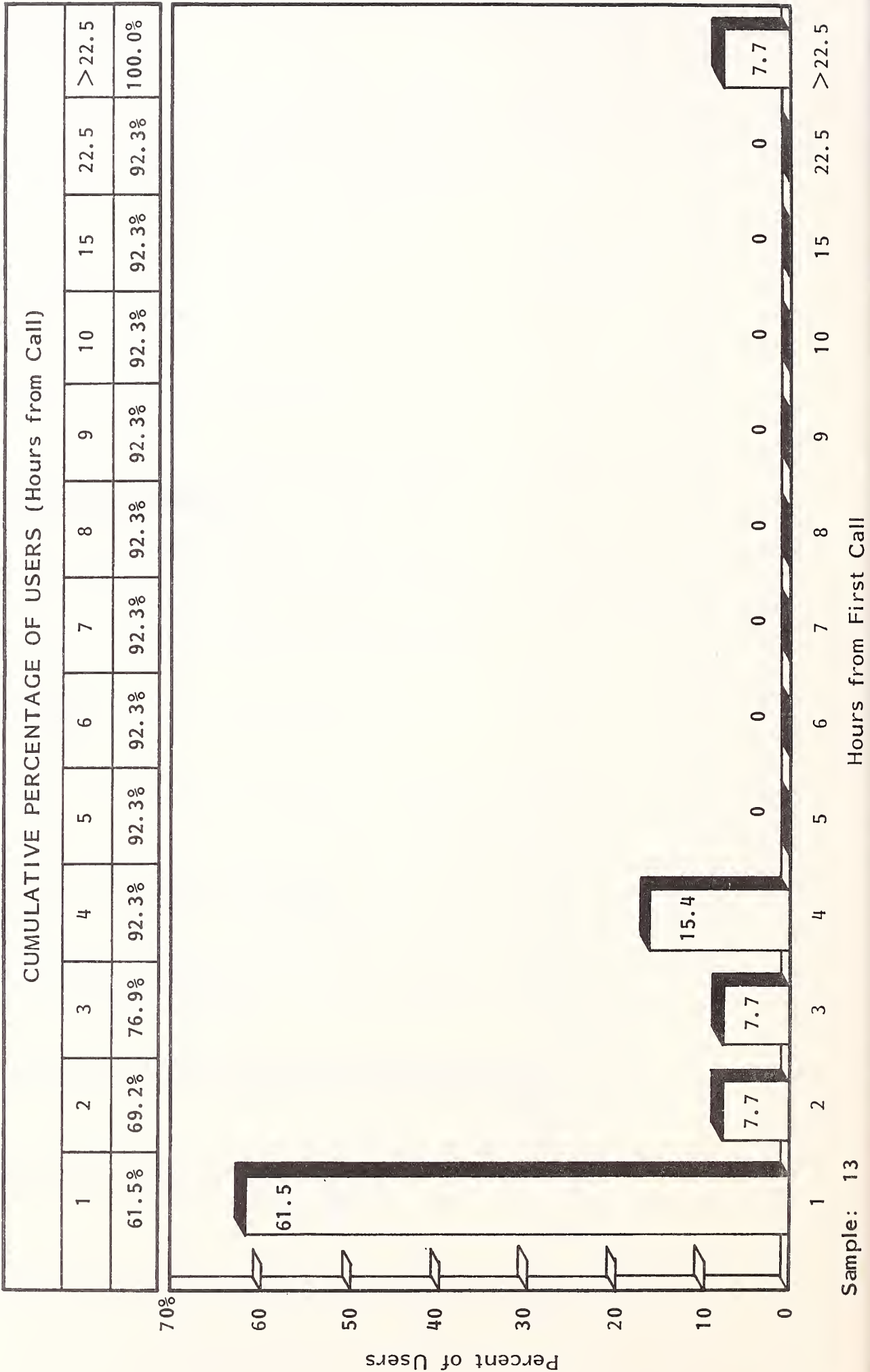
EXHIBIT III-43

RESPONSE TIMES: LONGEST TIME DELAY ACCEPTABLE TO SCANDINAVIAN USERS –
LARGE AND SMALL SYSTEMS

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

|	1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
	50.0%	50.0%	57.1%	85.7%	85.7%	85.7%	85.7%	85.7%	85.7%	85.7%	85.7%	92.9%	100.0%

Sample: 13

- 67 -

EXHIBIT III-44

RESPONSE TIMES: IDEAL REQUIREMENT OF SCANDINAVIAN USERS -
PERIPHERALS AND TERMINALS

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

	1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
	43.8%	50.0%	68.8%	75.0%	75.0%	75.0%	75.0%	87.5%	87.5%	87.5%	87.5%	93.8%	100.0%
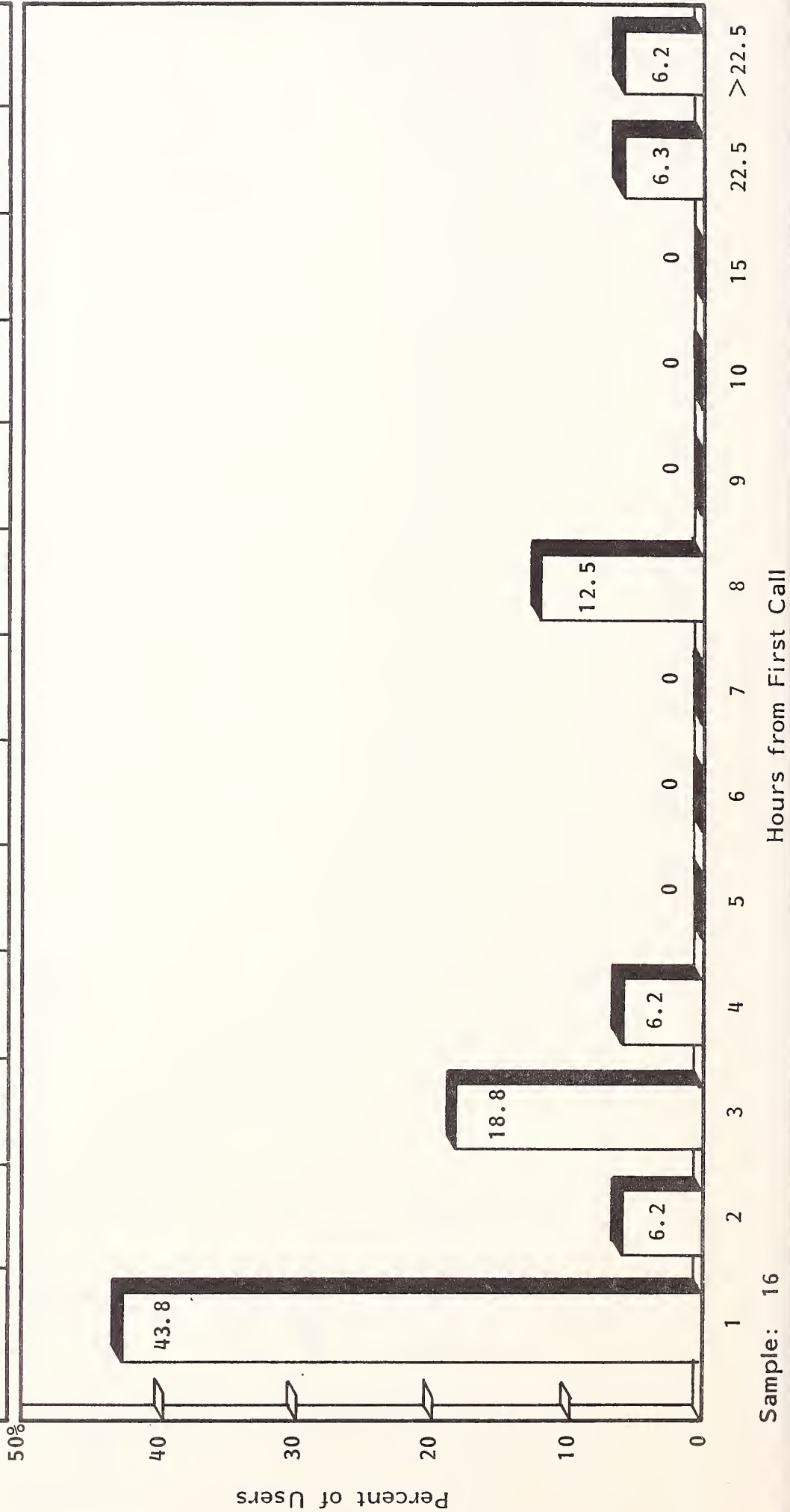
Percent of Users

Hours from First Call

Sample: 16

INP
FBUF

EXHIBIT III-45

RESPONSE TIME: LONGEST TIME DELAY ACCEPTABLE TO SCANDINAVIAN USERS -

PERIPHERALS AND TERMINALS

CUMULATIVE PERCENTAGE OF USERS (Hours from Call)

1	2	3	4	5	6	7	8	9	10	15	22.5	>22.5
43.8%	50.0%	50.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	93.8%	100.0%

Percent of Users

Hours from First Call

Sample: 16

- 69 -

INPUT
FBUR
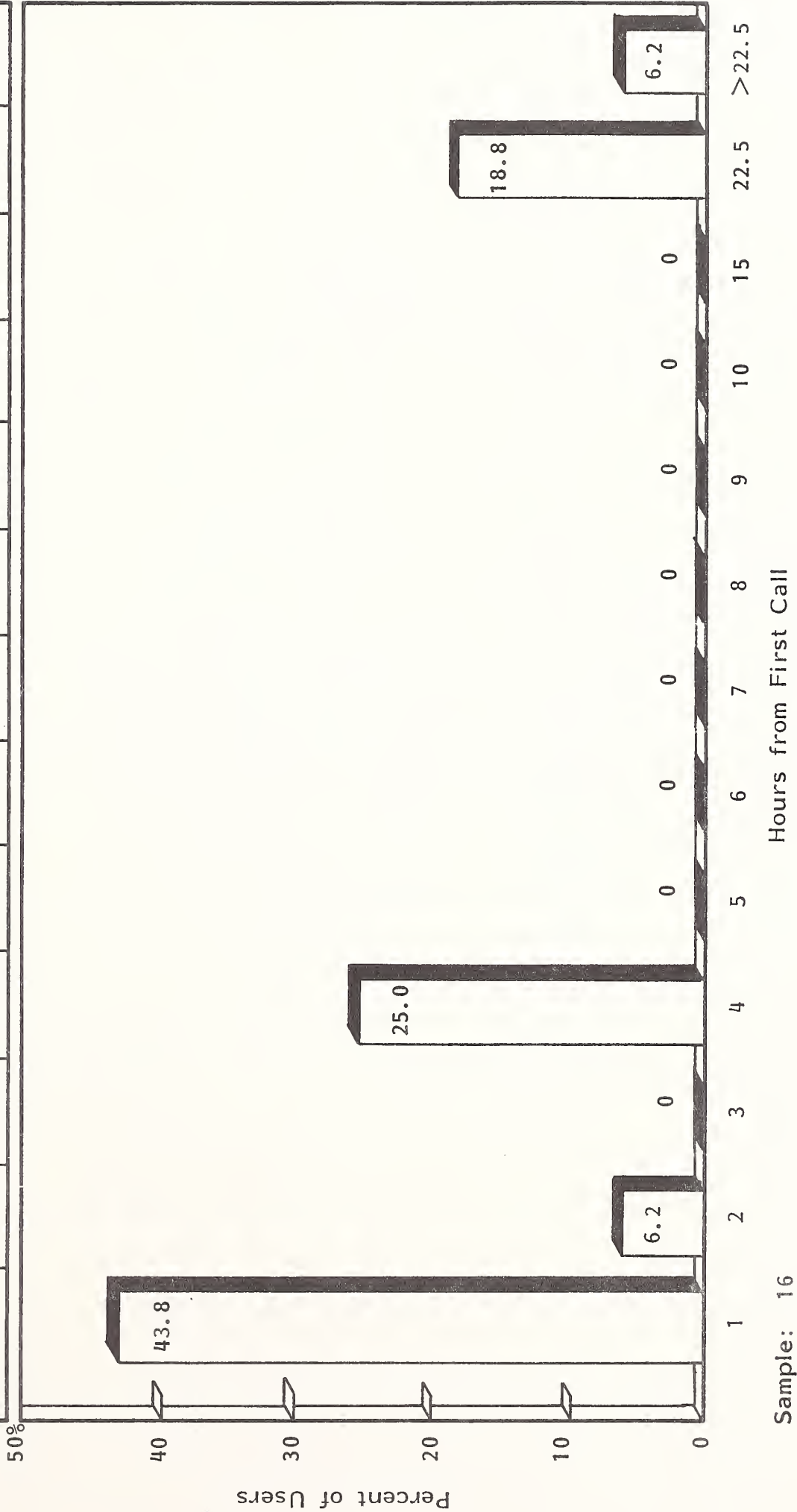
IV OTHER SERVICE NEEDS

IV   OTHER SERVICE NEEDS

- The service elements covered in this chapter include:

    - Guaranteed response time.

    - Guaranteed up-time.

    - Standby cover.

    - Guaranteed repair time.

    - Preventive maintenance.

    - On-site service parts.

    - Remote diagnostics.

    - Occasional shift cover.

    - On-site engineer.

- For each of these elements, users were asked to rate the importance to them for each product group. Appendix A summarises the relative importance of each factor for each product group.

A.   GUARANTEED RESPONSE TIME

- As can be seen in Exhibit IV-1, this is an area of great importance to U.K. users, particularly in the systems and data communications equipment product groups. Over one-third of the users of these product groups rated a guaranteed response time of primary importance. It becomes rather less important for office automation equipment, where 40% of users regard it as neutral or unimportant, and copiers, where almost one-half of the users are neutral or rate it unimportant.

- The position is similar in France, with most users attaching considerable importance to the guaranteed response time. Again, this service is least important for office automation equipment users and most important for systems users, 16% of whom regard it as being of vital importance (see Exhibit IV-2).

- In Germany, a guaranteed response time is generally less important than is the case in either the U.K. or France. With the exception of data communications equipment, over one-half of the users rate this service as neutral or unimportant. In the case of copiers, almost two-thirds of the users take this view (see Exhibit IV-3).

B.   GUARANTEED UP-TIME

- In the U.K., over 30% of systems users and 36% of data communications equipment users rate guaranteed up-time as being of primary importance. Again, this varies considerably from product group to product group. Fifty percent of copier users do not rate this to be important, and almost 45% of office automation equipment users also do not rate it as important (see Exhibit IV-4).

- 72 -

INPU

EXHIBIT IV-1

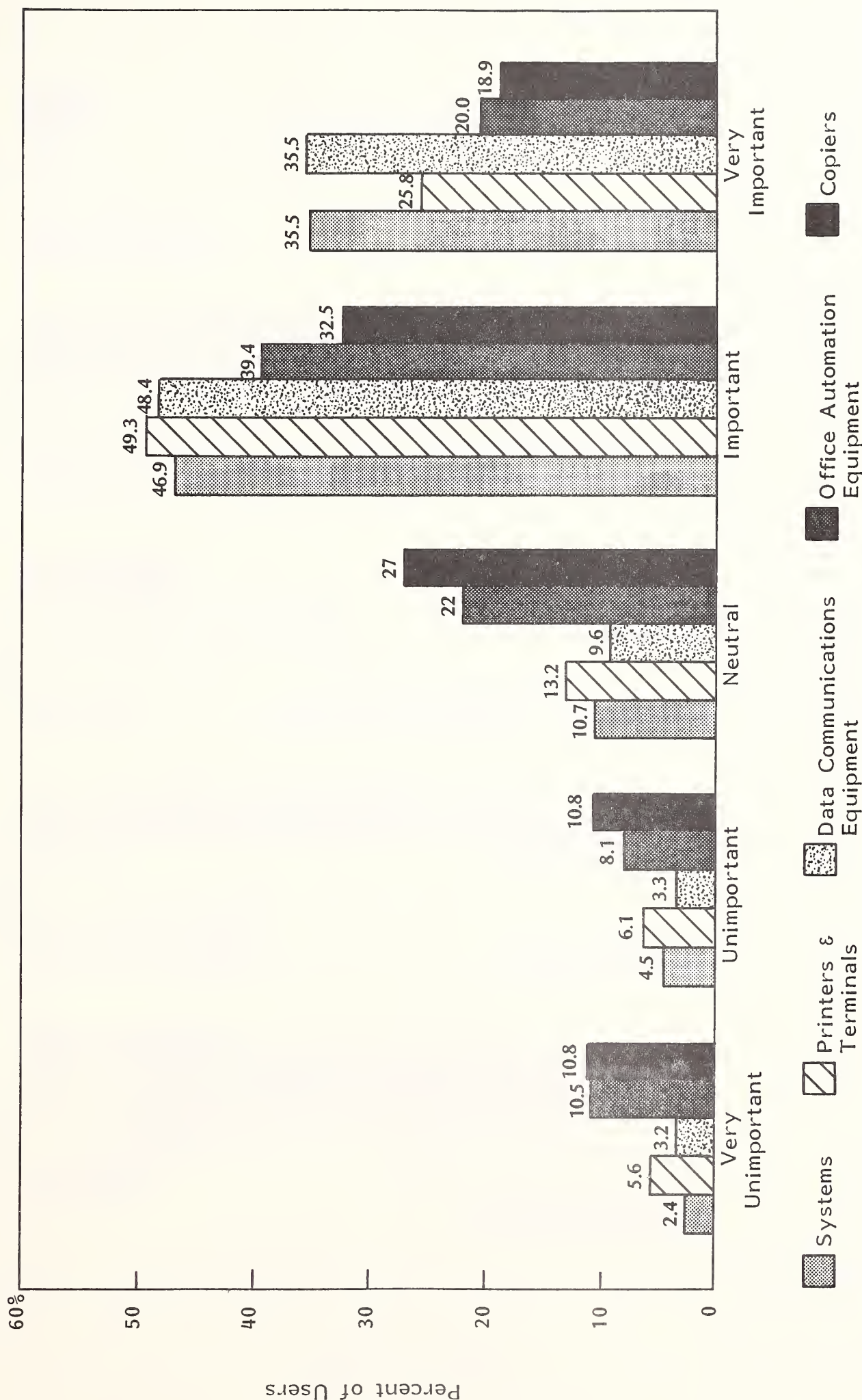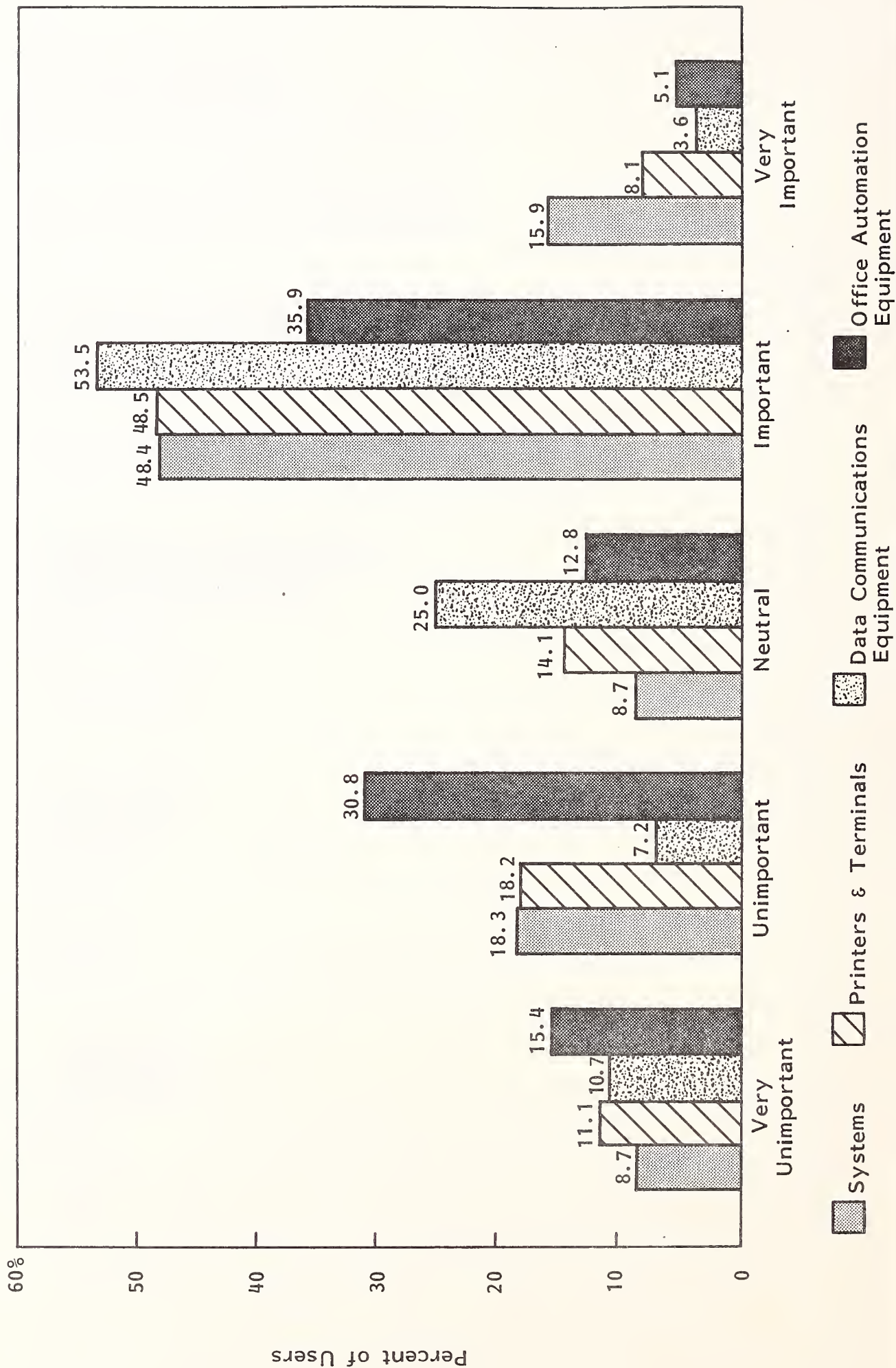IMPORTANCE TO USERS OF GUARANTEED RESPONSE TIME - UNITED KINGDOM

Legend:
- Systems
- Printers & Terminals
- Data Communications Equipment
- Office Automation Equipment
- Copiers

Percent of Users

INPUT
FUBR

EXHIBIT IV-2

IMPORTANCE TO USERS OF GUARANTEED RESPONSE TIME - FRANCE

INPU
FBUR

EXHIBIT IV-3

IMPORTANCE TO USERS OF GUARANTEED RESPONSE TIME – GERMANY

Percent of Users

Legend:
- Systems
- Printers & Terminals
- Data Communications Equipment
- Office Automation Equipment
- Copiers

INPUT
FUBR
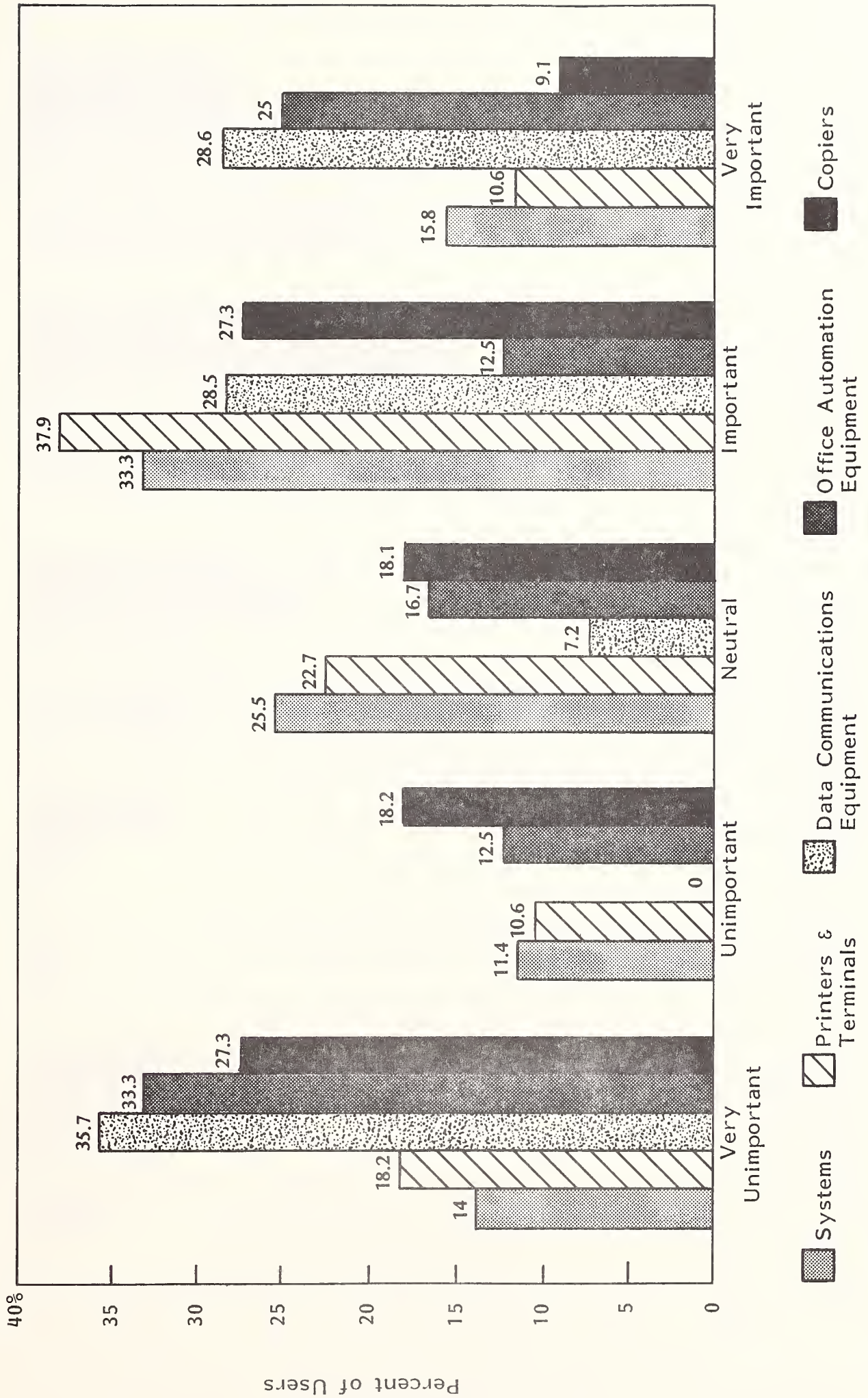
EXHIBIT IV-4

IMPORTANCE TO USERS OF GUARANTEED UP-TIME – UNITED KINGDOM

Percent of Users

Legend:
- Systems
- Printers & Terminals
- Data Communications Equipment
- Office Automation Equipment
- Copiers

INP
FUBR
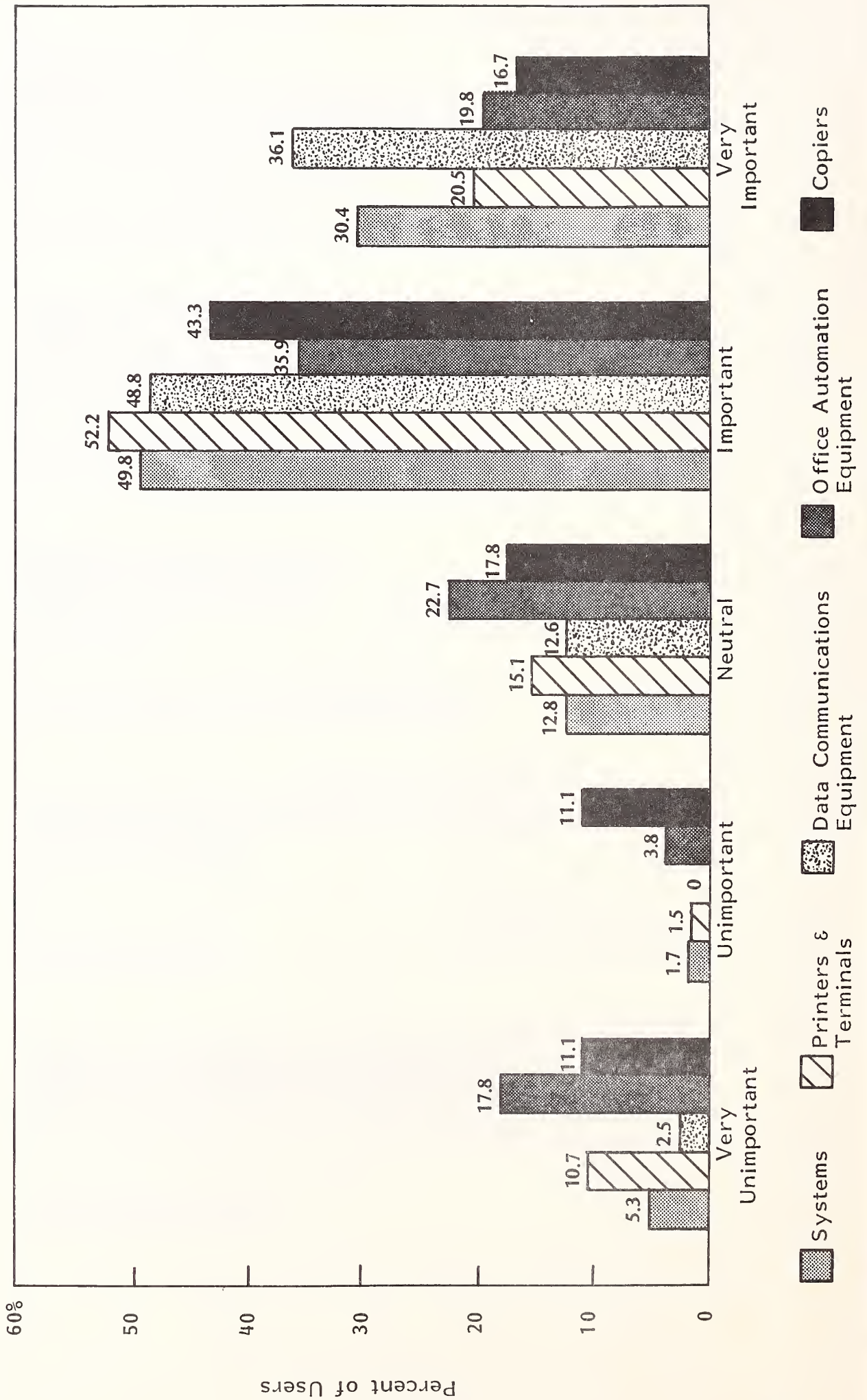
- French users generally rate guaranteed up-time as being less important than do U.K. users. Almost one-third of systems users do not regard it as important, as do one-quarter of the data communications equipment users (see Exhibit IV-5).

- In Germany, guaranteed up-time rates surprisingly low. On average, only systems users rate it as being of above average importance. All copier users regard guaranteed up-time as being of neutral importance or unimportant (see Exhibit IV-6).

C.   GUARANTEED REPAIR TIME

- Almost one-quarter of U.K. systems users and 30% of data communications equipment users regard guaranteed repair time as being of prime importance, whereas less than 20% of peripheral and terminal users, office automation equipment users, and copier users regard it as so important. Over one-half of the OA and copier users rate guaranteed repair time as important (see Exhibit IV-7).

- Fewer users in France than the U.K. consider guaranteed repair time to be of prime importance, and almost one-half of the users across all equipment groups rate it as neutral or unimportant (see Exhibit IV-8).

- In Germany, the guaranteed repair time is almost universally regarded as unimportant, as can be clearly seen in Exhibit IV-9. Between two-thirds and three-quarters of all users do not consider it an important issue.

INPUT

EXHIBIT IV-5

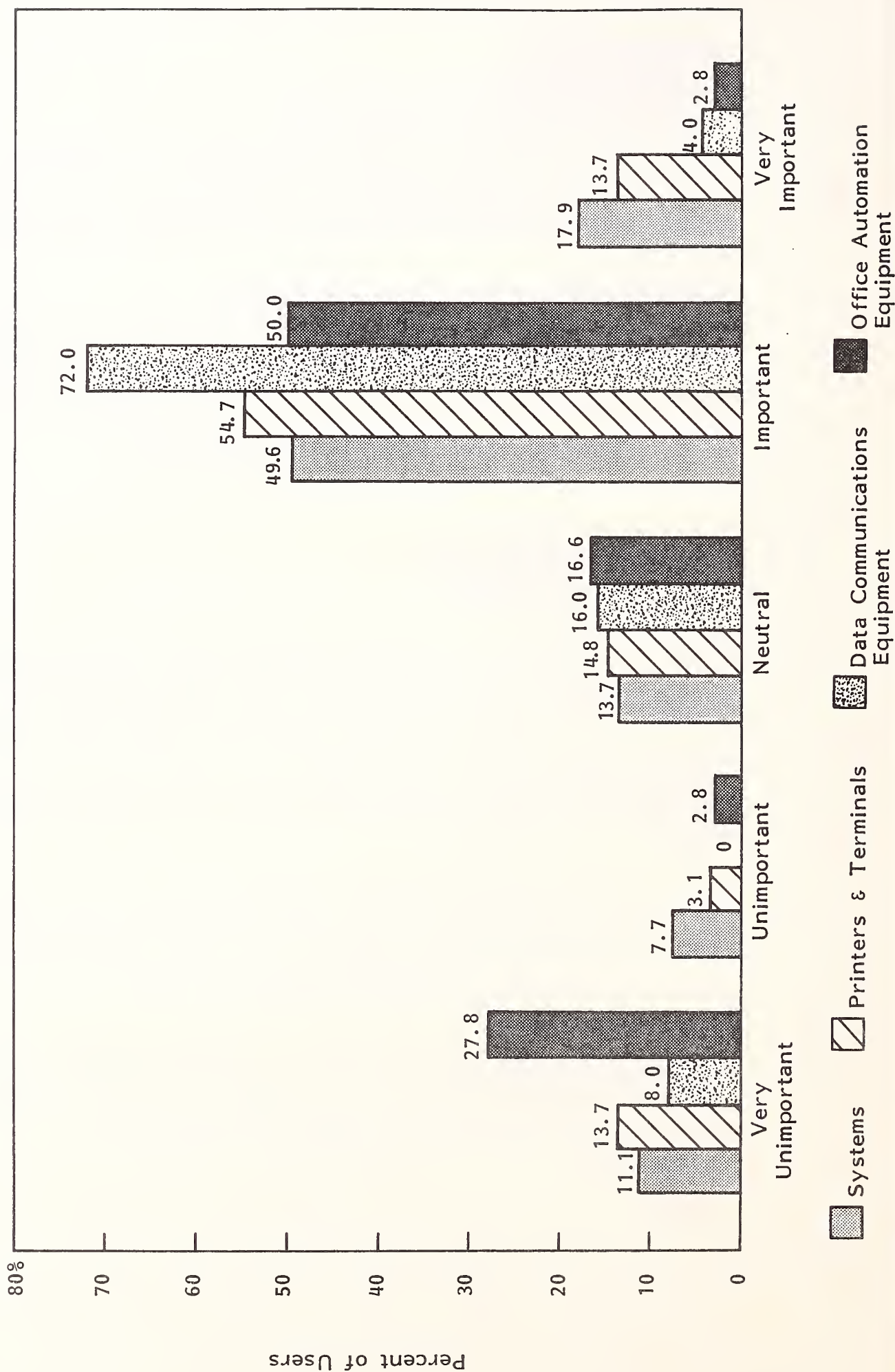IMPORTANCE TO USERS OF GUARANTEED UP-TIME – FRANCE

INPU
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EXHIBIT IV-6

IMPORTANCE TO USERS OF GUARANTEED UP-TIME - GERMANY
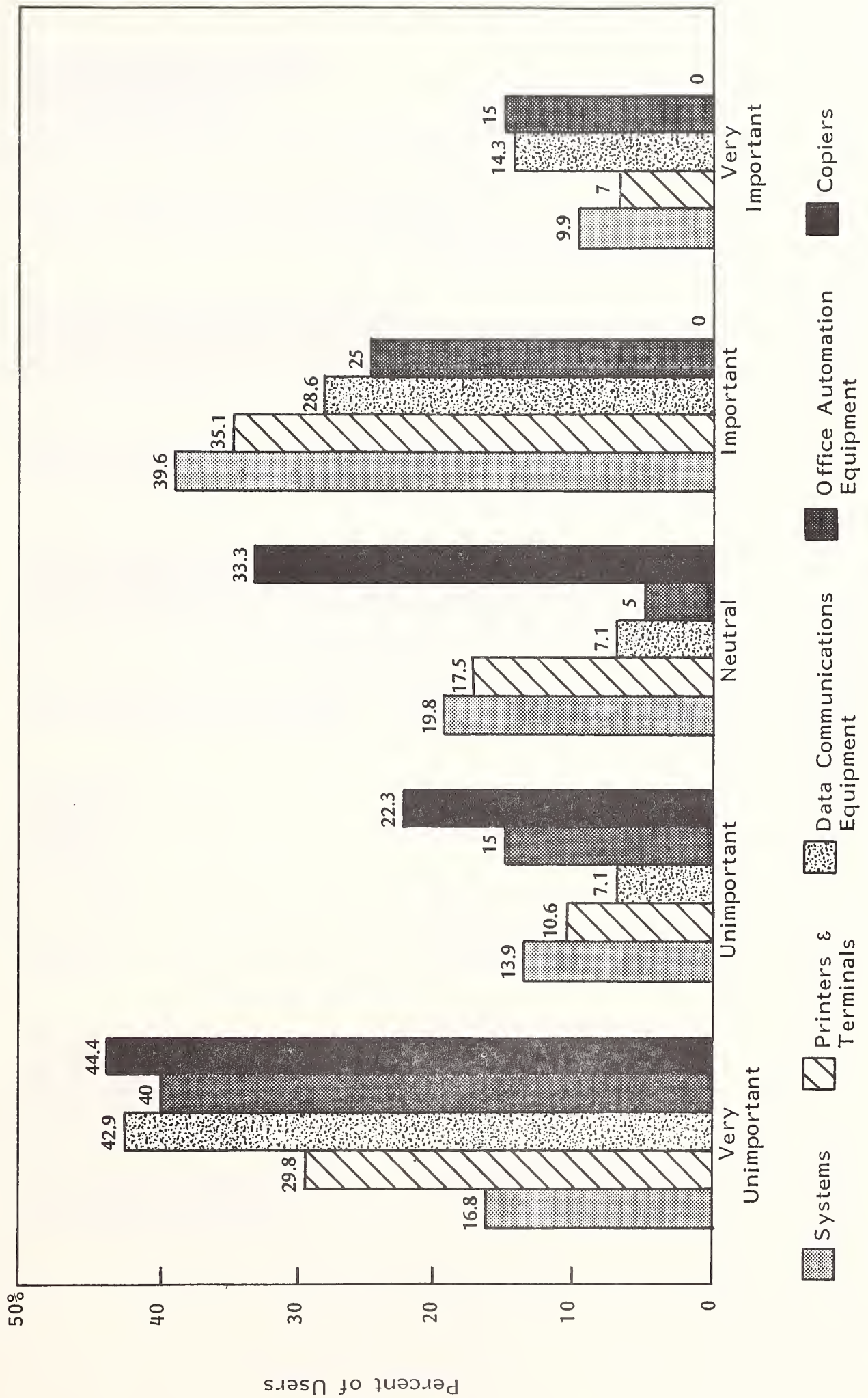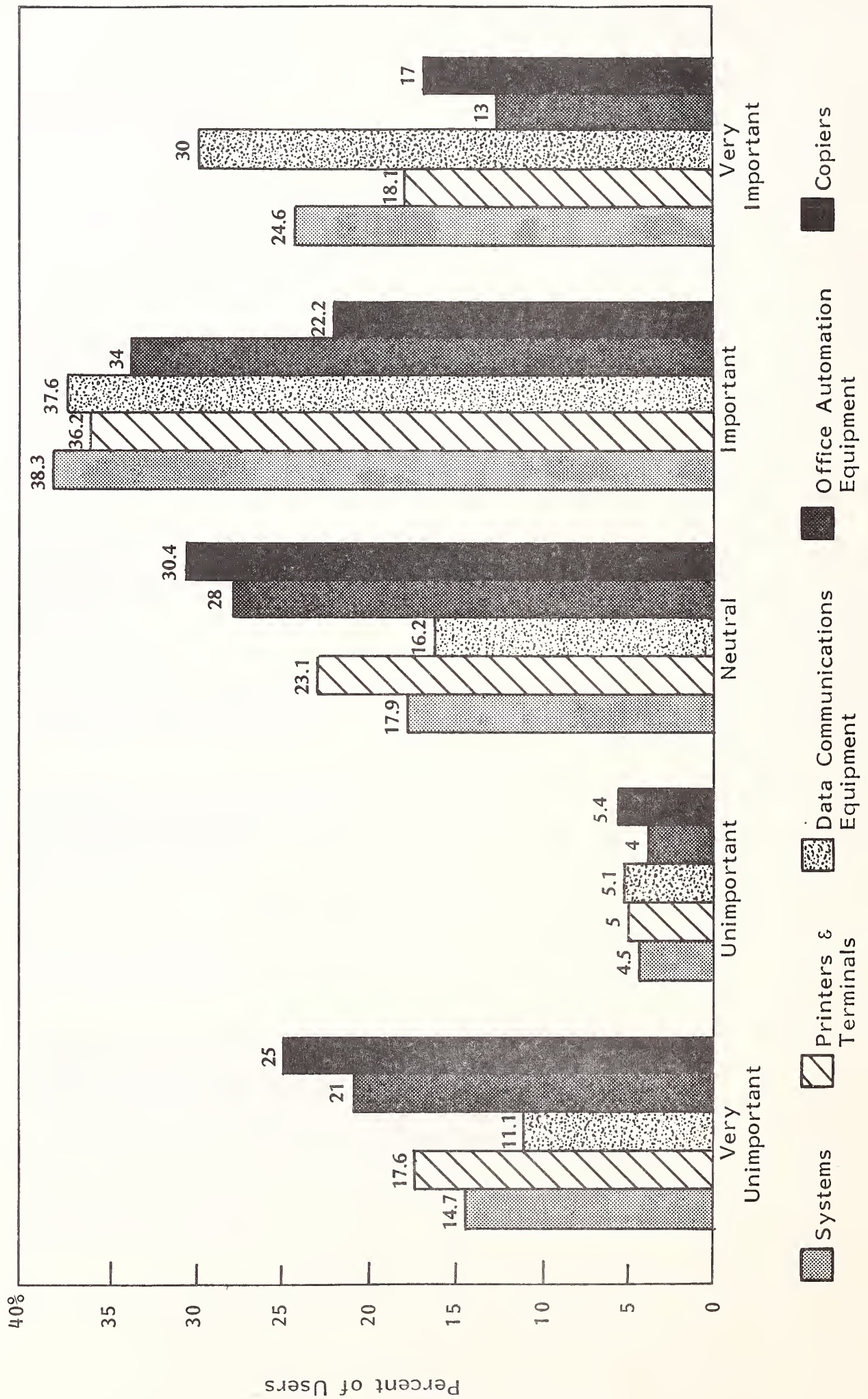
INPUT
FUBR

EXHIBIT IV-7

IMPORTANCE TO USERS OF GUARANTEED REPAIR TIME - UNITED KINGDOM

INP
FUBR

EXHIBIT IV-8

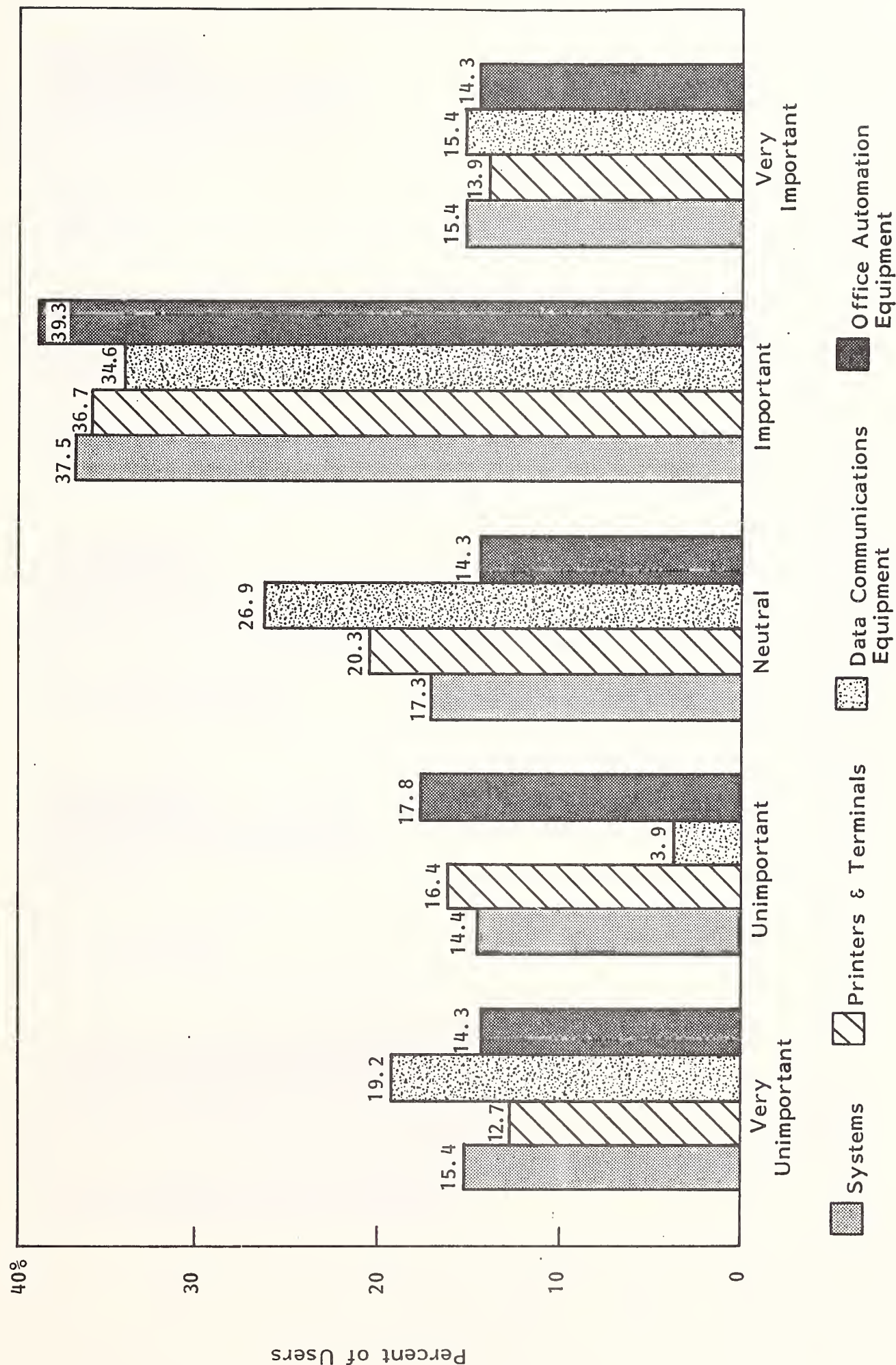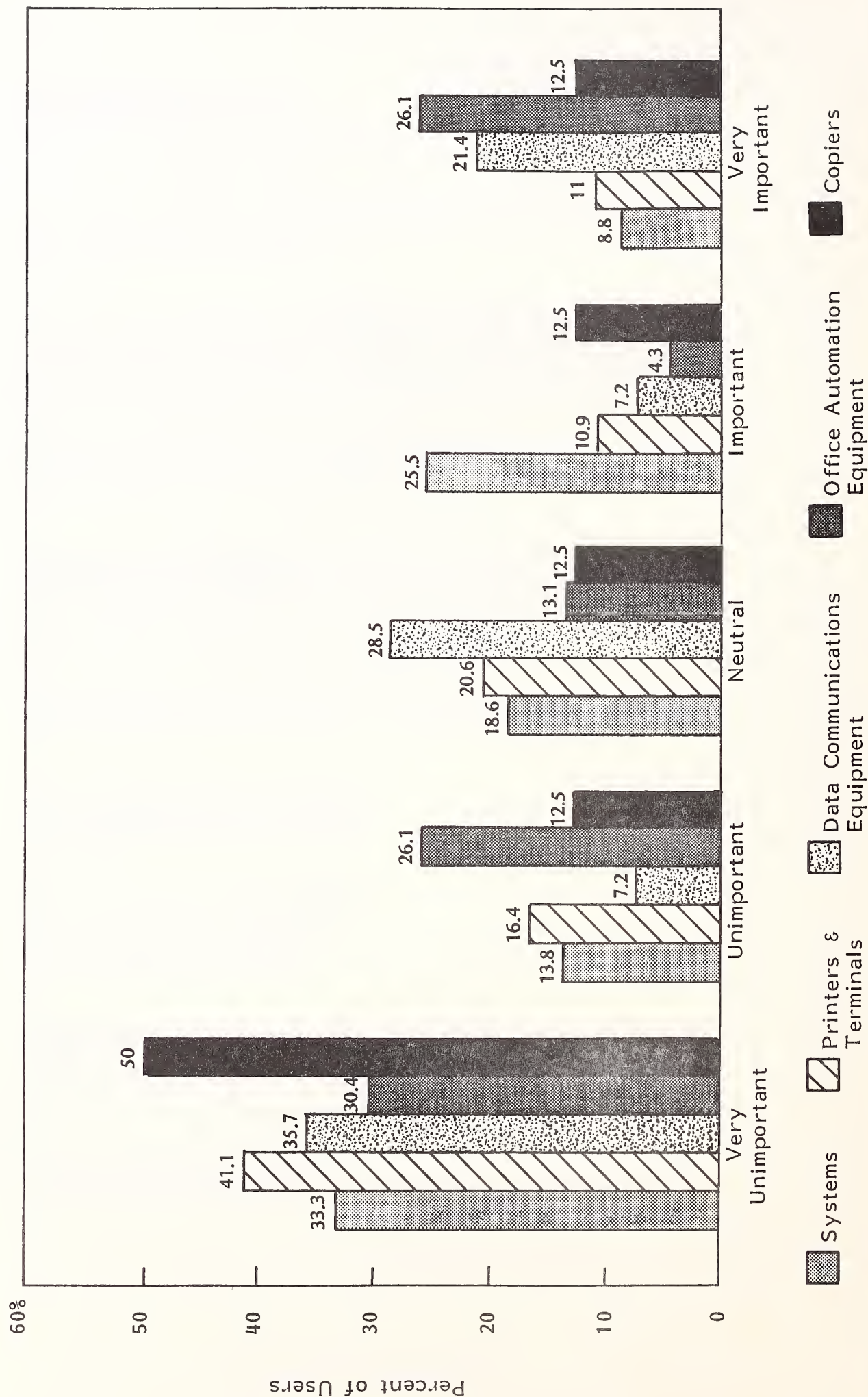IMPORTANCE TO USERS OF GUARANTEED REPAIR TIME - FRANCE

Percent of Users

Legend:
- Systems
- Printers & Terminals
- Data Communications Equipment
- Office Automation Equipment

INPUT
FBUR

EXHIBIT IV-9

IMPORTANCE TO USERS OF GUARANTEED REPAIR TIME - GERMANY

Legend:
- Systems
- Printers & Terminals
- Data Communications Equipment
- Office Automation Equipment
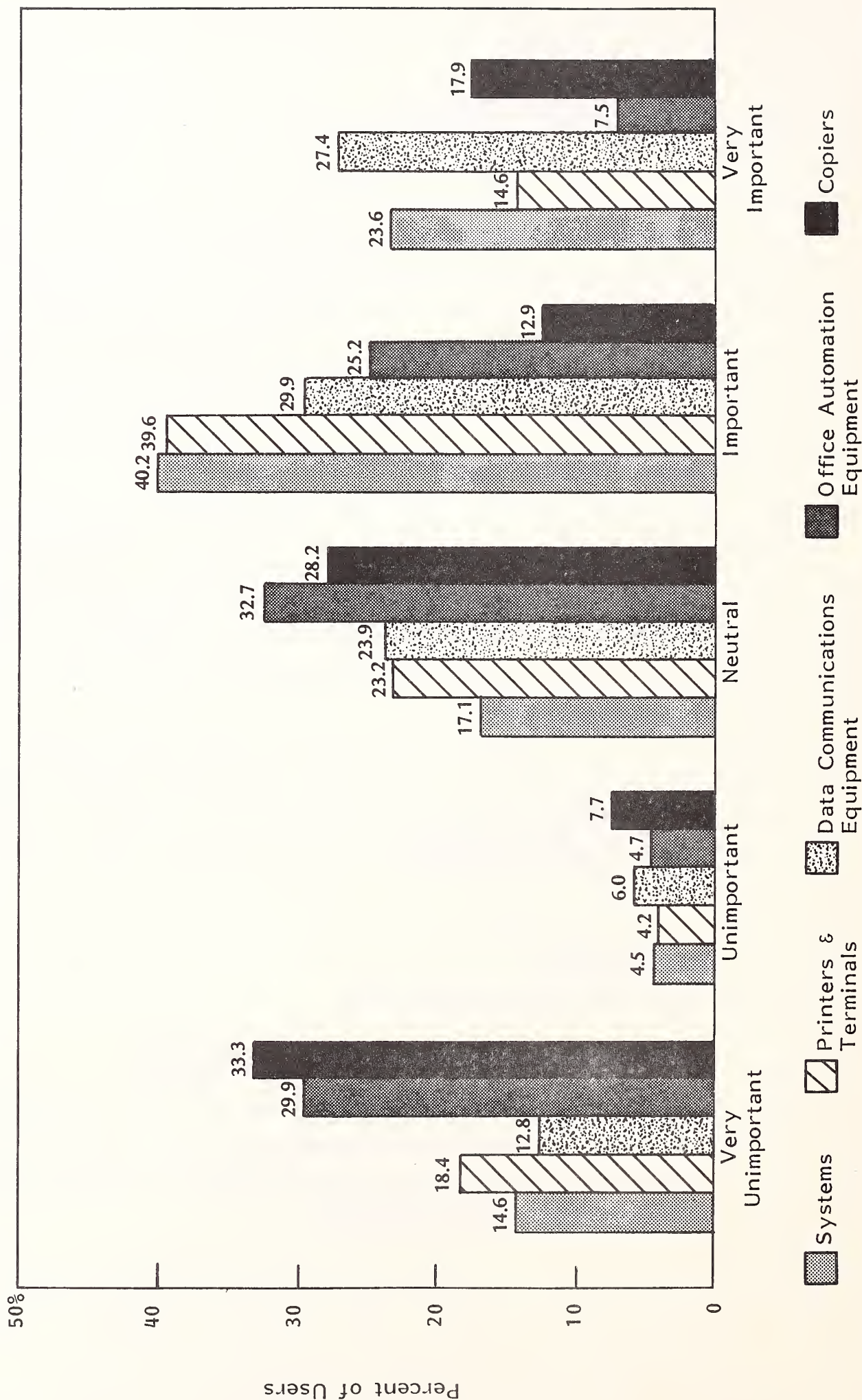- Copiers

Percent of Users

INP
FUBR

D. STANDBY COVER

● In the U.K., standby cover is relatively important for systems users, rating third behind guaranteed response time and guaranteed up-time, but ahead of guaranteed repair time. For all other product groups, standby cover rates fourth in priority, with guaranteed repair time moving into third place. About 25% of systems and data communications equipment users rate standby cover as being of prime importance, while one-third of copier users rate it as being of no importance at all (see Exhibit IV-10).

● In France, standby cover is generally less important, falling behind preventive maintenance and on-site parts (as well as up-time and response and repair time) for most product groups. Forty-five percent of office automation equipment users consider it very unimportant, with 30% of other product users also regarding it as of very minor importance (see Exhibit IV-11).

● In Germany, by contrast, standby cover is much more important. For most products, the exceptions being office automation equipment and copiers, standby cover is rated the most important factor. As shown in Exhibit IV-12, between 11% and 20% of users consider standby cover to be of prime importance.

E. PREVENTIVE MAINTENANCE (PM)

● This important service seems to be viewed with mixed feelings by users. From a vendor's viewpoint, it is important that users understand the benefits of preventive maintenance, as it could be a potential revenue source in the future.

- 83 -

INPUT

EXHIBIT IV-10

IMPORTANCE OF STANDBY COVER - UNITED KINGDOM

Percent of Users

Legend:
- Systems
- Printers & Terminals
- Data Communications Equipment
- Office Automation Equipment
- Copiers

INPU
FUBR

EXHIBIT IV-11

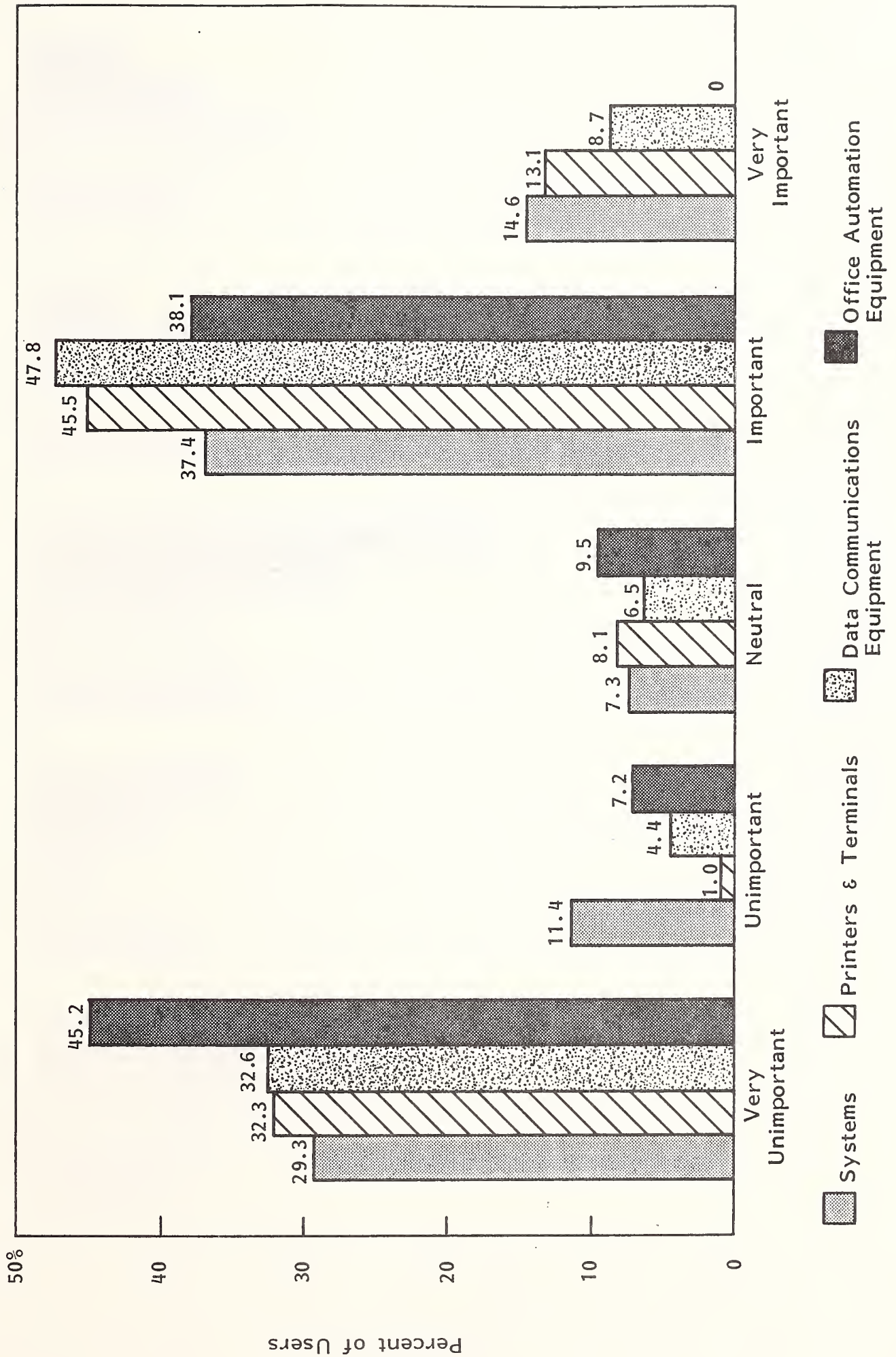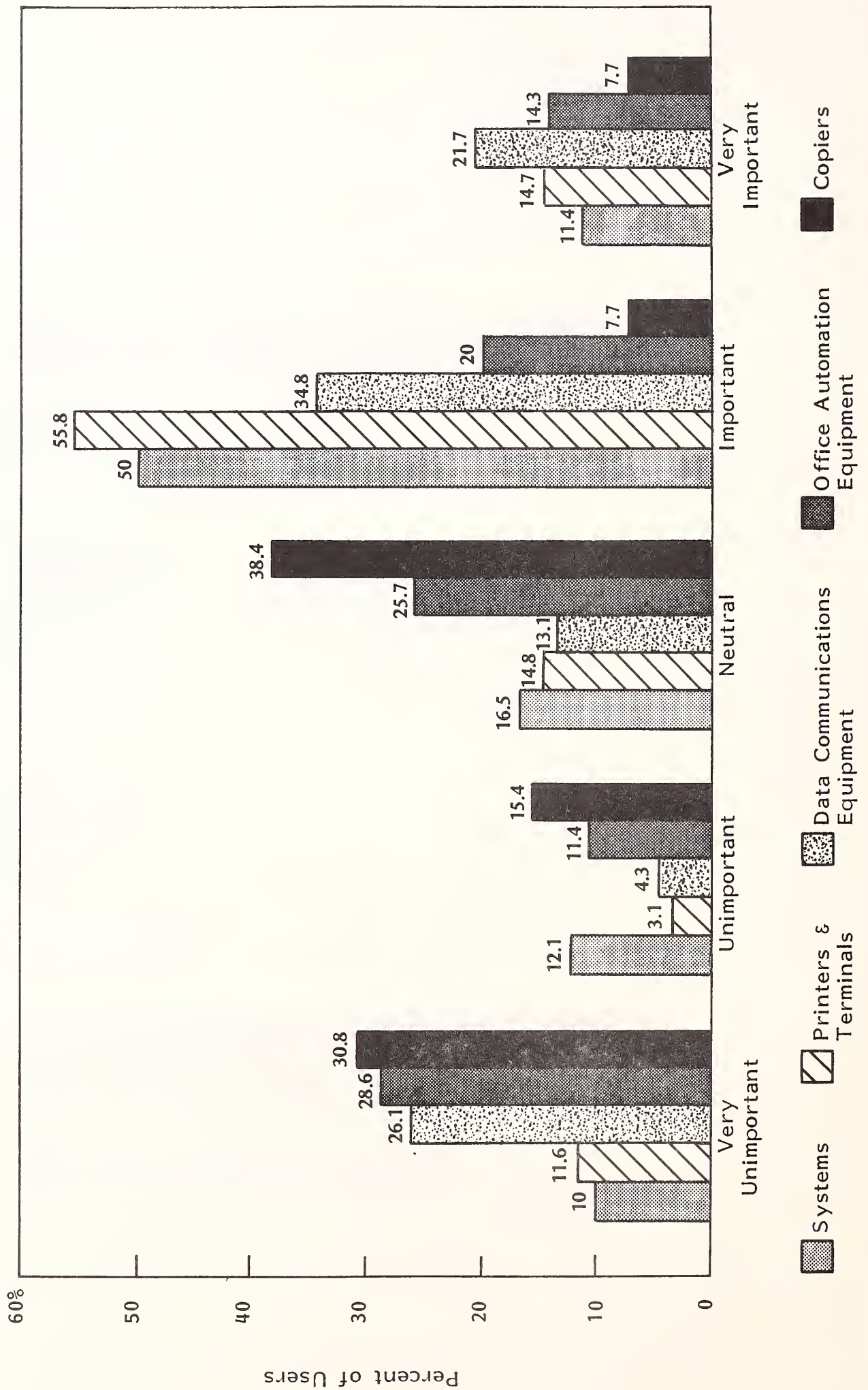IMPORTANCE OF STANDBY COVER - FRANCE

INPUT
FBUR

EXHIBIT IV-12

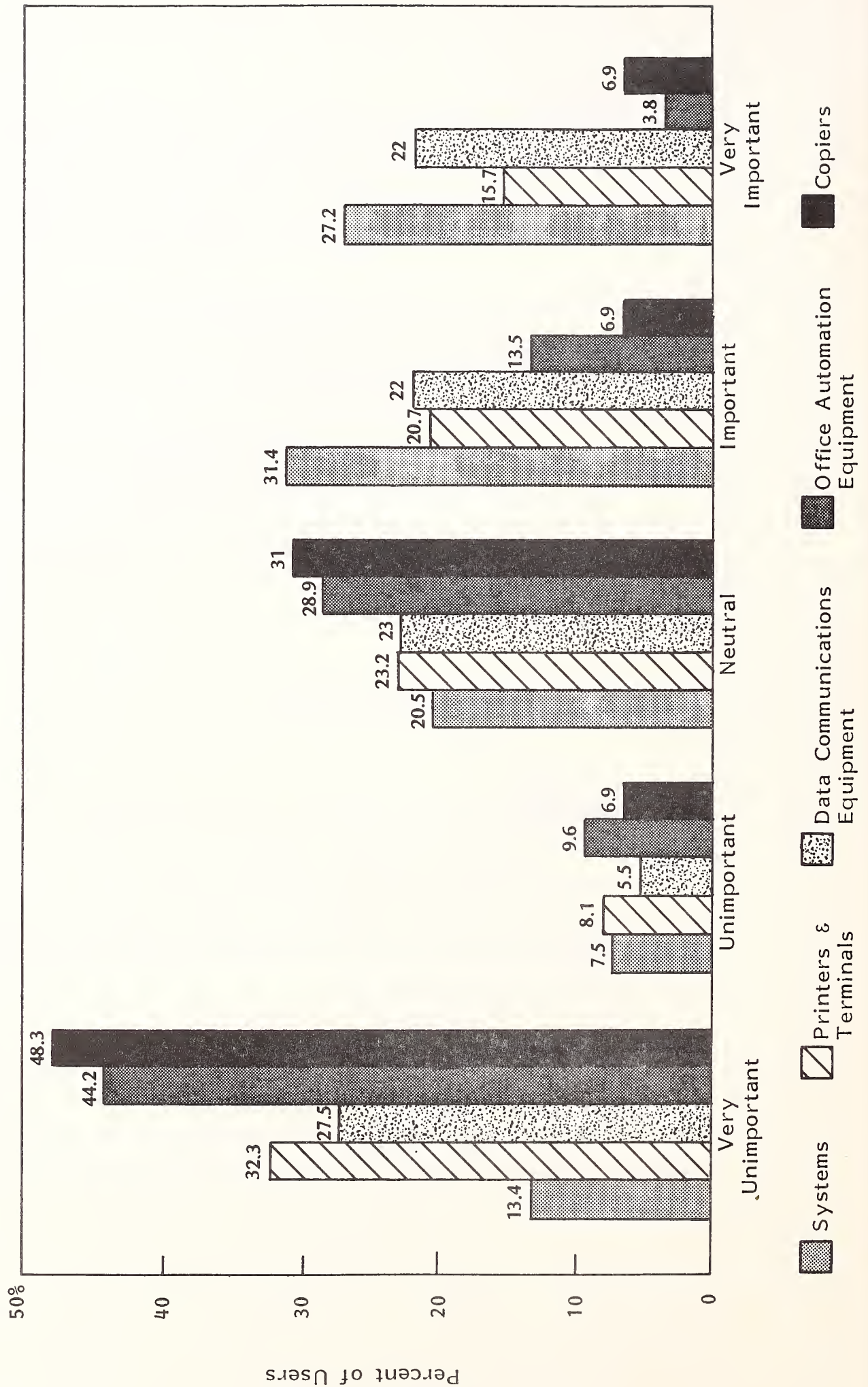IMPORTANCE OF STAND-BY COVER - GERMANY

INPU
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- As one would expect, PM is more important for the major hardware products and less so for peripherals and terminals and office automation equipment. In fact, in the U.K., for all products other than systems and data communications equipment, PM is generally regarded as unimportant (see Exhibit IV-13).

- In France, PM is even less highly regarded, with only systems users rating it above average. Over 20% of peripheral users and 40% of data communications and office automation equipment users rate it as being of minimal importance (see Exhibit IV-14).

- In Germany, the situation is a little different, with systems, peripherals, and data communications on average rating PM as marginally important, but with significant numbers of users rating it as of very minor importance, as is shown in Exhibit IV-15.

F.   PROVISION OF ON-SITE SERVICE PARTS

- U.K. system users view this service as reasonably important, but there is considerable divergence of opinion. While at one extreme, 16% of users regard it as an extremely important service, at the other extreme, 18% of users view it as of minimal importance. Again, with data communications equipment, 21% of users see this as an important service, while 29% say it is very unimportant (see Exhibit IV-16).

- In France, there are some surprising results. Systems users, on average, do not think the provision of on-site parts is important, whereas users think it is important for peripherals and terminals and data communications equipment. Generally, however, as shown in Exhibit IV-17, most users regard this facility as unimportant.

INPUT

EXHIBIT IV-13

IMPORTANCE OF PREVENTIVE MAINTENANCE - UNITED KINGDOM

INPU
FUBR

EXHIBIT IV-14

IMPORTANCE OF PREVENTIVE MAINTENANCE - FRANCE

Legend:
- Systems
- Printers & Terminals
- Data Communications Equipment
- Office Automation Equipment

Very Important:
- Office Automation Equipment: 8.3
- Printers & Terminals: 8.1
- Systems: 14.5
- Data Communications Equipment: 0

Important:
- Office Automation Equipment: 17.2
- Data Communications Equipment: 20.9
- Printers & Terminals: 31.3
- Systems: 38.9

Neutral:
- Office Automation Equipment: 20.7
- Data Communications Equipment: 12.5
- Printers & Terminals: 24.2
- Systems: 17.6

Unimportant:
- Office Automation Equipment: 20.7
- Data Communications Equipment: 16.6
- Printers & Terminals: 15.2
- Systems: 12.2

Very Unimportant:
- Office Automation Equipment: 41.4
- Data Communications Equipment: 41.7
- Printers & Terminals: 21.2
- Systems: 16.8

Percent of Users

- 89 -

INPUT
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EXHIBIT IV-15

IMPORTANCE OF PREVENTIVE MAINTENANCE - GERMANY

Percent of Users

Legend:
- Systems
- Printers & Terminals
- Data Communications Equipment
- Office Automation Equipment
- Copiers

Very Important:
- Copiers: 11.1
- Office Automation Equipment: 28
- Data Communications Equipment: 31.2
- Printers & Terminals: 19.7
- Systems: 17.5

Important:
- Copiers: 11.1
- Office Automation Equipment: 12
- Data Communications Equipment: 12.5
- Printers & Terminals: 35.6
- Systems: 37.5

Neutral:
- Copiers: 0
- Office Automation Equipment: 4
- Data Communications Equipment: 12.5
- Printers & Terminals: 11.8
- Systems: 15.8

Unimportant:
- Copiers: 11.1
- Office Automation Equipment: 20
- Data Communications Equipment: 12.5
- Printers & Terminals: 7.9
- Systems: 10.9

Very Unimportant:
- Copiers: 66.7
- Office Automation Equipment: 36
- Data Communications Equipment: 31.3
- Printers & Terminals: 25
- Systems: 18.3

- 90 -

EXHIBIT IV-16

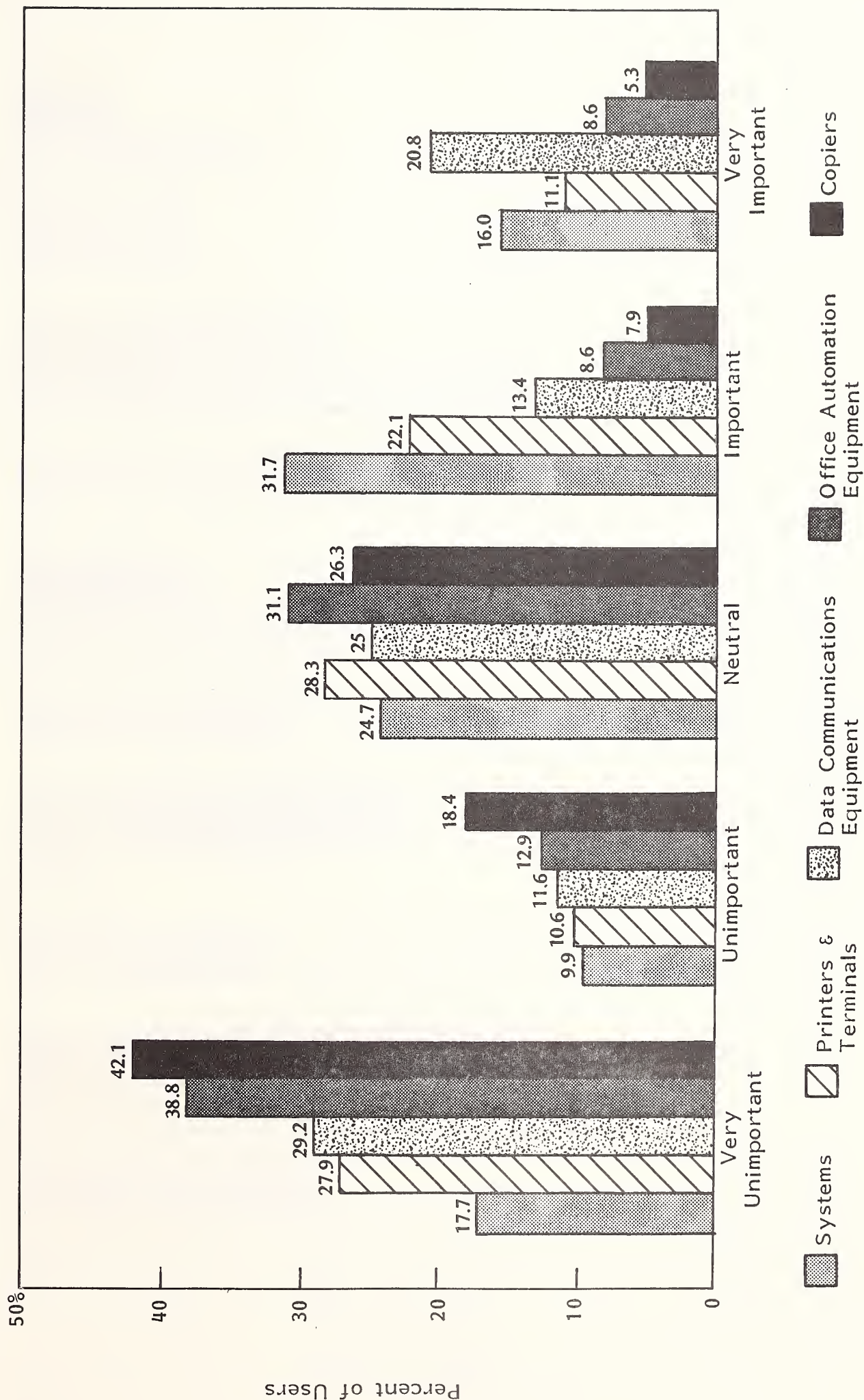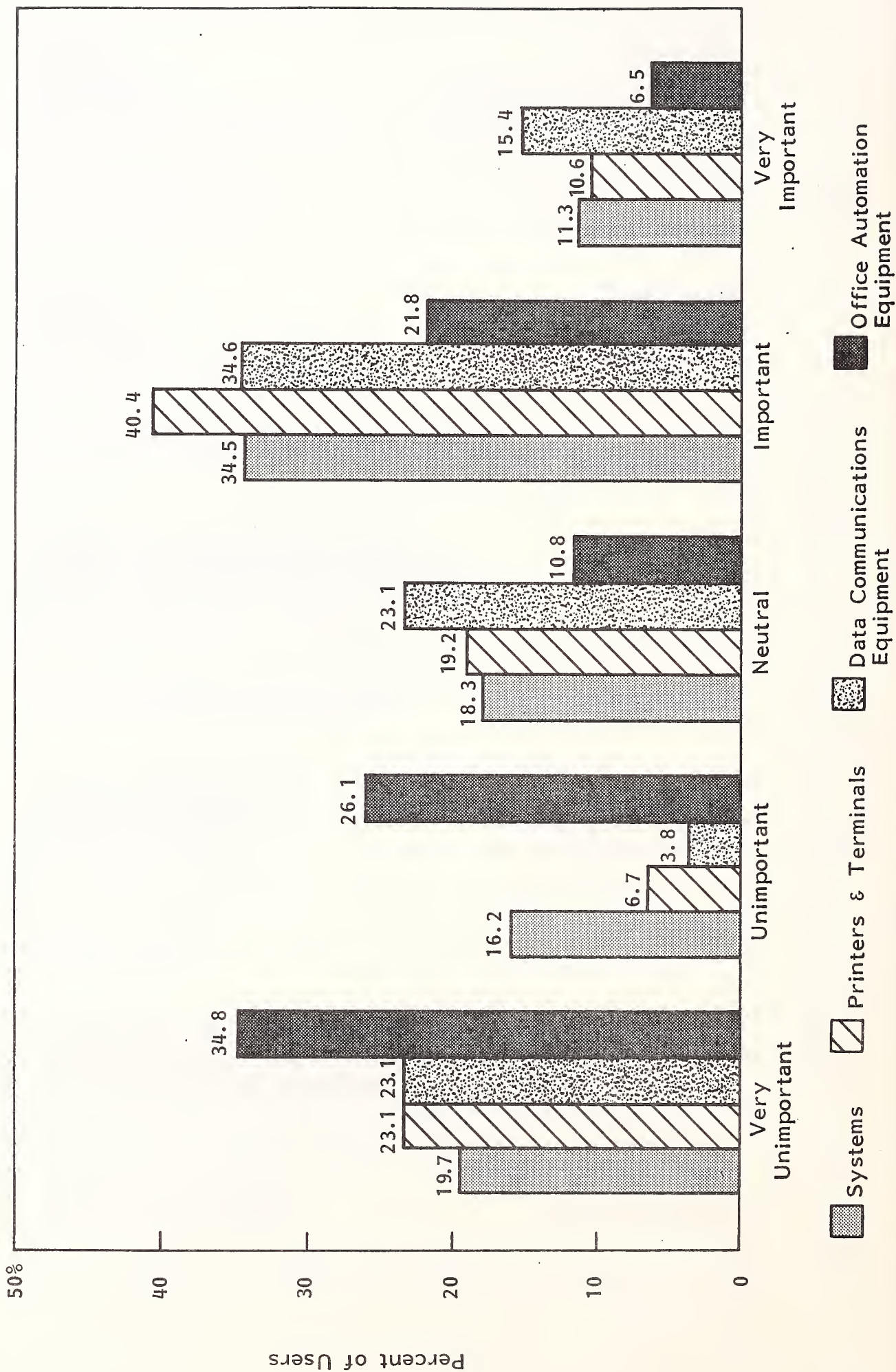IMPORTANCE OF ON-SITE PARTS - UNITED KINGDOM

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FUBR

EXHIBIT IV-17

IMPORTANCE OF ON-SITE PARTS - FRANCE

INPUT
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- German system users are the most positive in favour of having parts on-site, with 55% of them regarding it as an important service. In fact, for most products, German users are more keen than either French or U.K. users to have service parts on site. The only product group where this is not so is data communciations equipment (see Exhibit IV-18).

G.   REMOTE DIAGNOSTICS

- INPUT's 1984 Annual Report found that just over 11% of engineers' calls were not successfully completed, requiring a further visit. With each call costing an average $212 and an average call rate of 520 calls per engineer year, the total cost of these unsuccessful calls is some $12,350 per engineer per year—a serious negative impact on profitability.

- Effective remote diagnostics could prove to be a valuable tool in reducing the volume of repeat calls and improving overall customer service profitability. Unfortunately, users are not convinced about the value or effectiveness of remote diagnostics, and generally still prefer to have an engineer attending on-site as soon as possible.

- In the U.K., over half the users of peripherals and terminals, office auto-mation equipment, and copiers regard remote diagnostics as unimportant. One-third of systems users, probably the main beneficiaries of remote diag-nostics, regard it as unimportant, and a further third are neutral about it (see Exhibit IV-19).

- In France, the situation is a little more positive, with users generally in favour of remote diagnostics for data communications equipment. Compared to the U.K., all users are more pre-remote diagnostics, as can be seen in Exhibit IV-20.

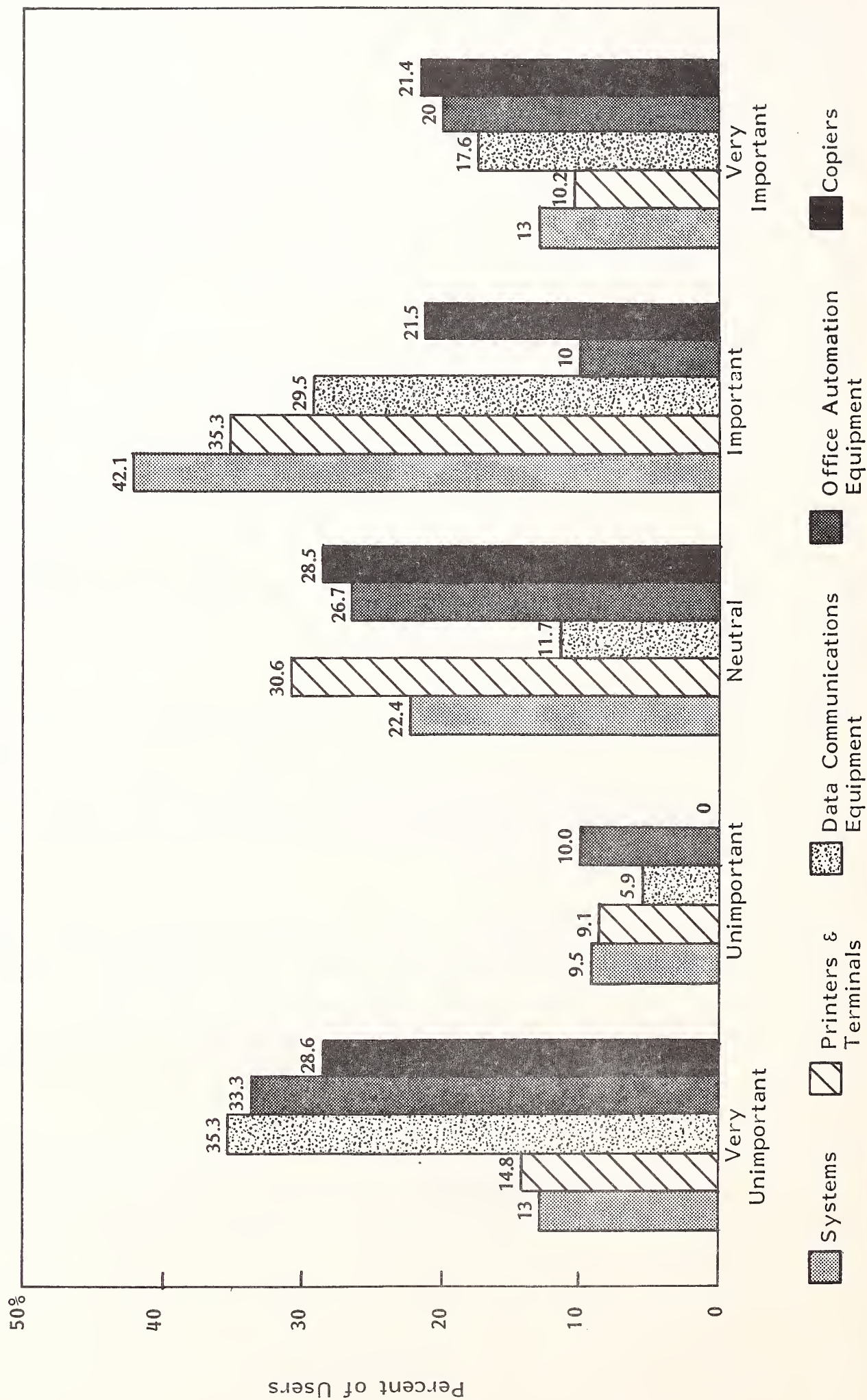**INPUT**

EXHIBIT IV-18

IMPORTANCE OF ON-SITE PARTS - GERMANY

INPU
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EXHIBIT IV-19

IMPORTANCE OF REMOTE DIAGNOSTICS - UNITED KINGDOM
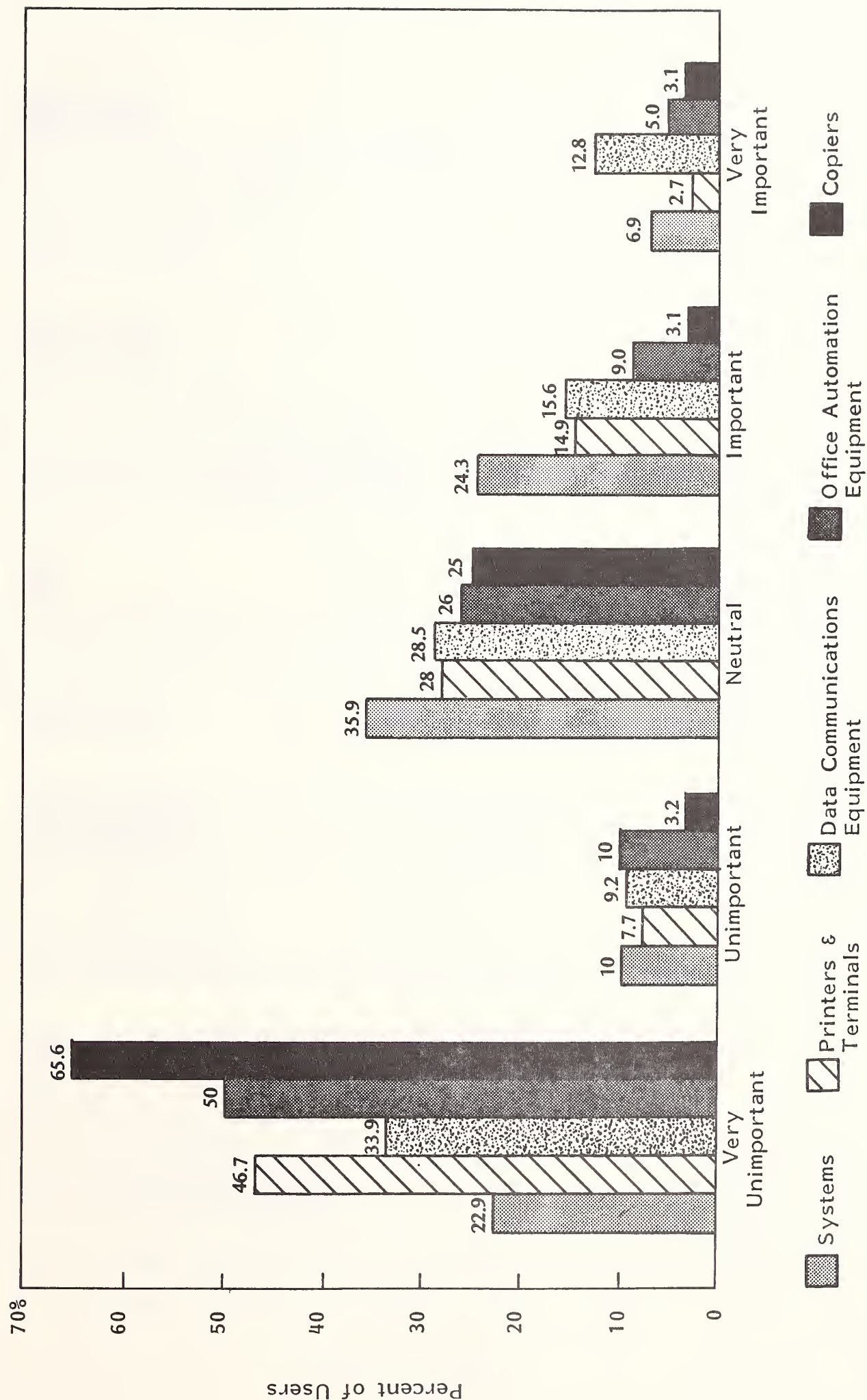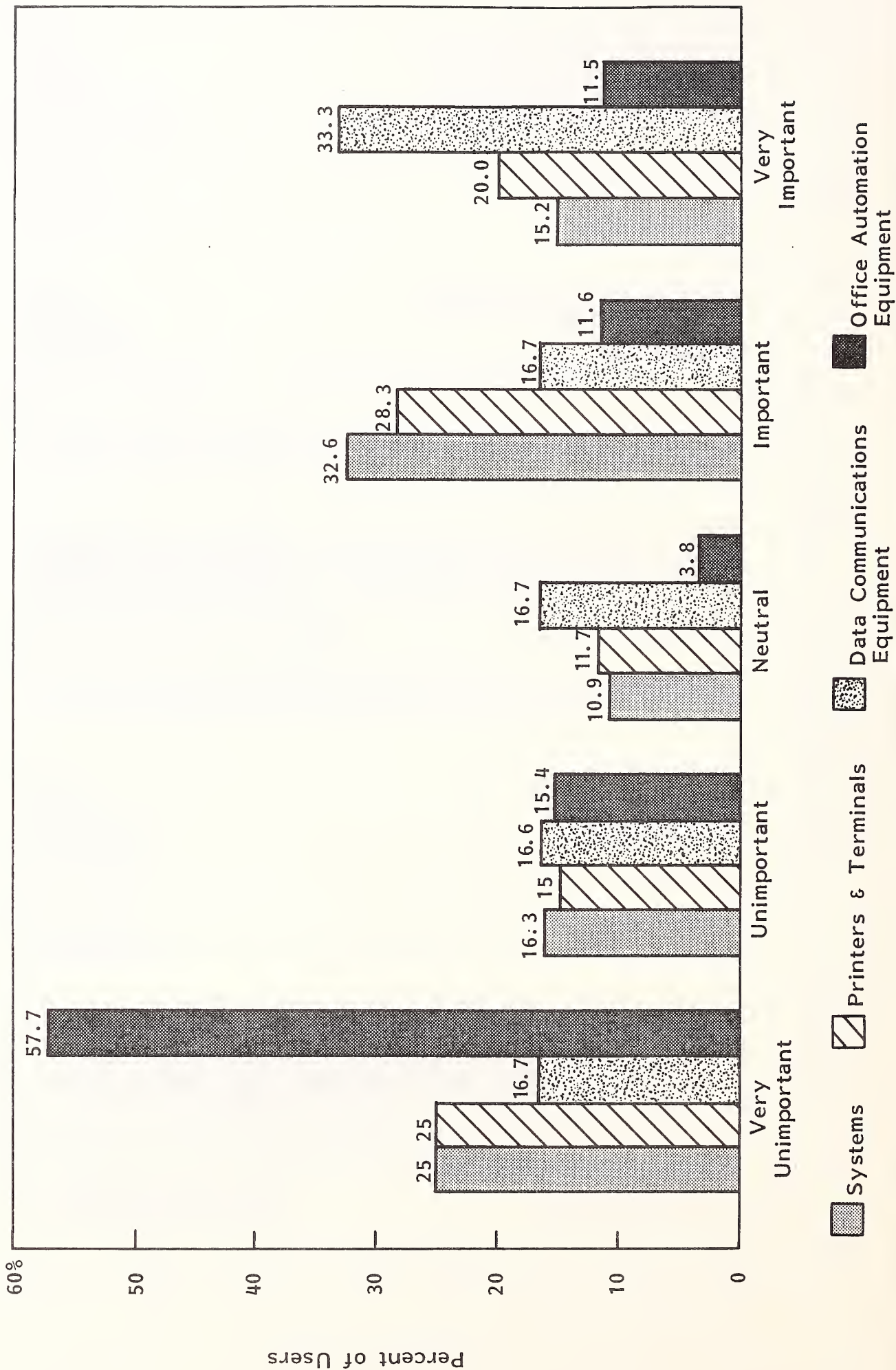
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FUBR

EXHIBIT IV-20

IMPORTANCE OF REMOTE DIAGNOSTICS - FRANCE

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- In Germany, users are in favour of remote diagnostics for systems, but generally rate it as unimportant for other products, especially office automation equipment and copiers (see Exhibit IV-21).
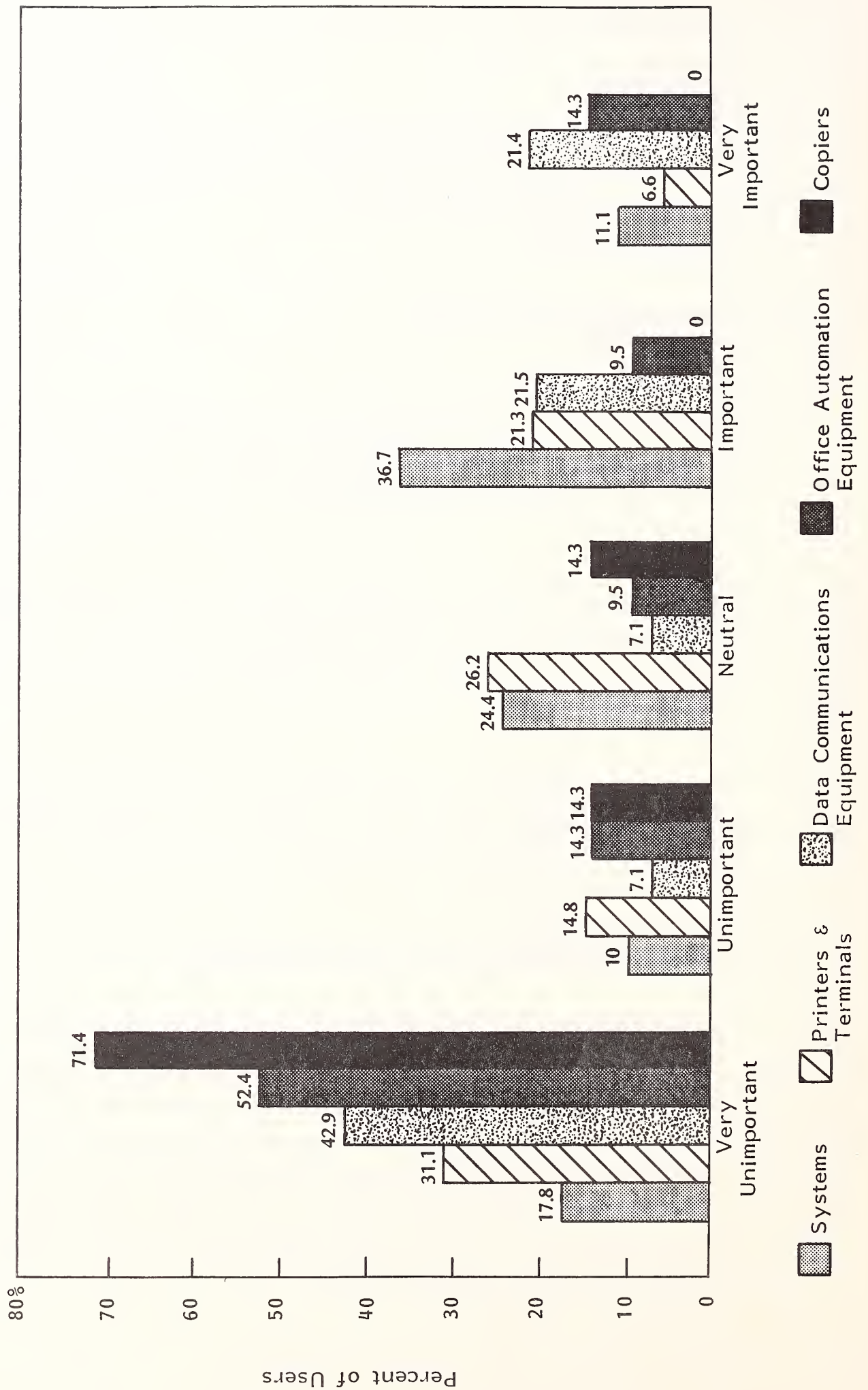
H.   OCCASIONAL SHIFT COVER

- This is one of the least important requirements among users. In the U.K., well over one-half of all users regard it as unimportant for all products, with the exception of systems, and even there, only 38% regard it as important (see Exhibit IV-22).

- In France, users regard it as slightly more important for most products than do U.K. users; the rather strong exception being for systems, where only 34% regard it as important compared to 41% for peripherals and terminals (see Exhibit IV-23).

- German systems users on average regard occasional shift cover as important. Forty-eight percent of them say it is important, as do 38% of users of peripherals and terminals. Exhibit IV-24 shows the complete picture.

I.   PROVISION OF A DEDICATED ON-SITE ENGINEER

- Provision of a dedicated on-site engineer is almost universally the least important facility to users--in fact the only exception being among German copiers users, where remote diagnostics is rated as marginally less important than an on-site engineer. German users generally regard this as a more important service than either French or U.K. users. Having said that, one user in eight in the U.K. sees this as being very important. Exhibits IV-25 through IV-27 show the complete picture.

INPUT

EXHIBIT IV-21

IMPORTANCE OF REMOTE DIAGNOSTICS - GERMANY

INPUT
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EXHIBIT IV-22

IMPORTANCE OF OCCASIONAL SHIFT COVER - UNITED KINGDOM

- 99 -

INPUT
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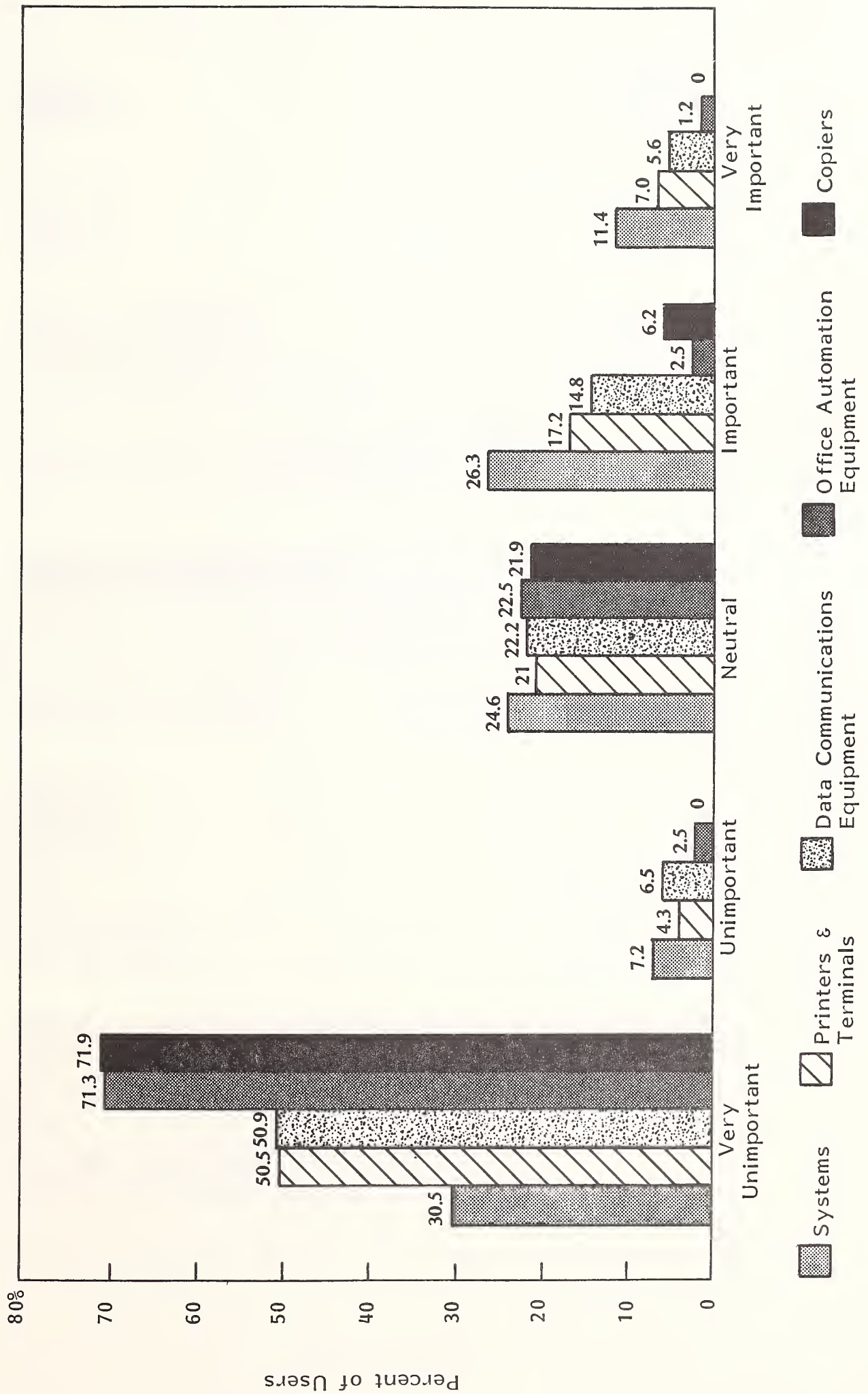
EXHIBIT IV-23

IMPORTANCE OF OCCASIONAL SHIFT COVER - FRANCE

INPUT
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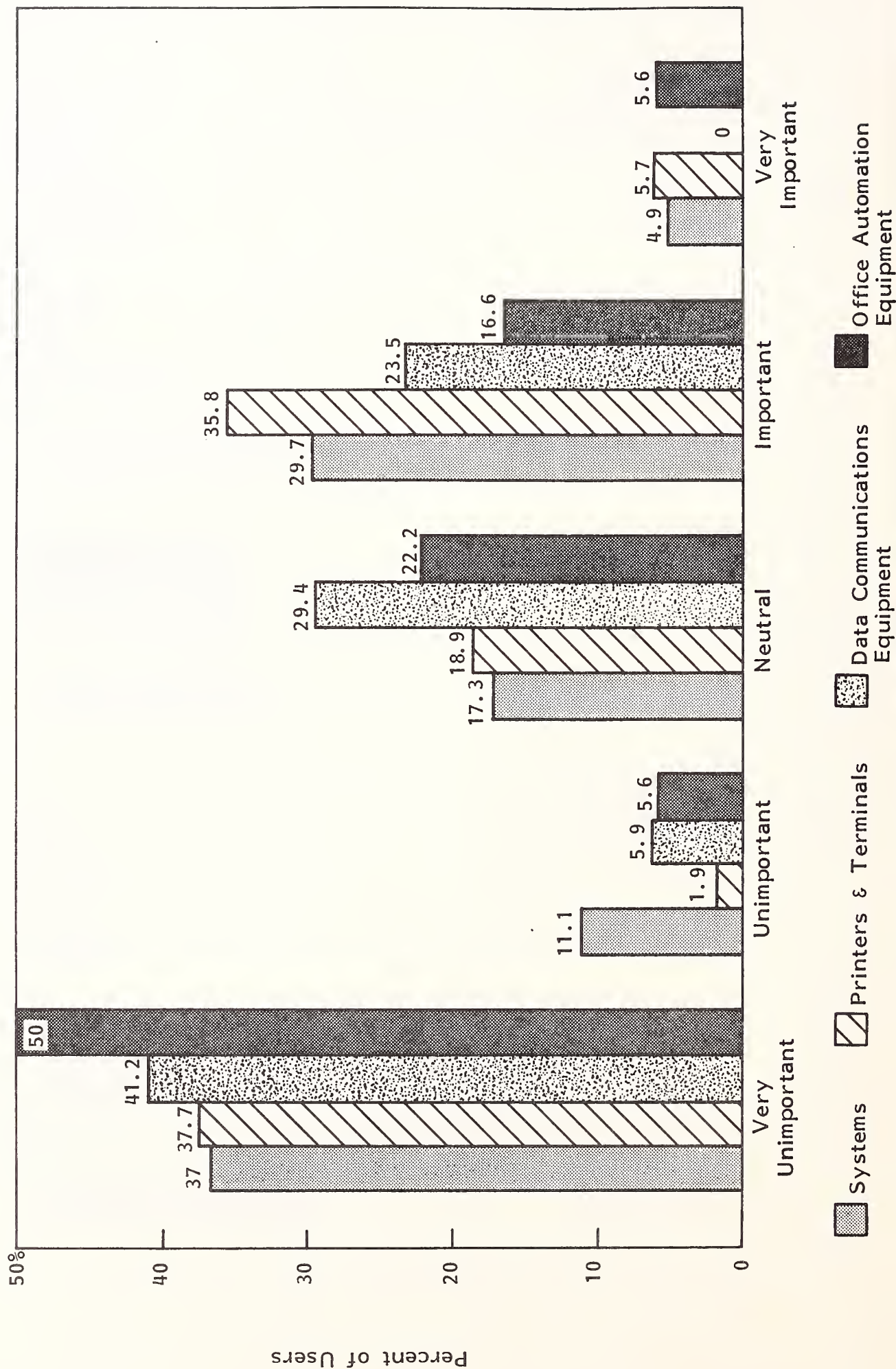
EXHIBIT IV-24

IMPORTANCE OF OCCASIONAL SHIFT COVER - GERMANY

INPUT
FUBR
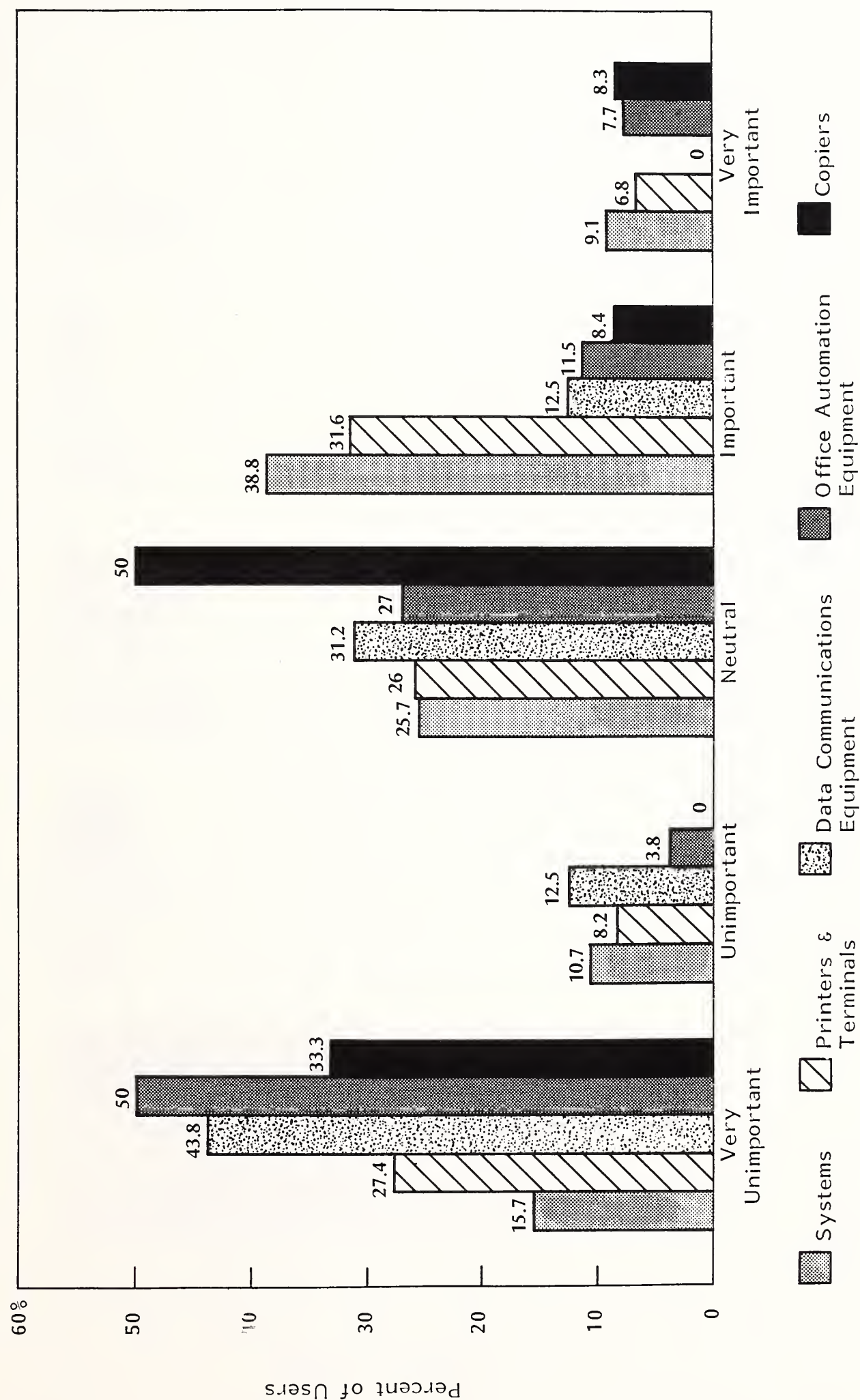
EXHIBIT IV-25

IMPORTANCE OF AN ON-SITE ENGINEER – UNITED KINGDOM

INPUT
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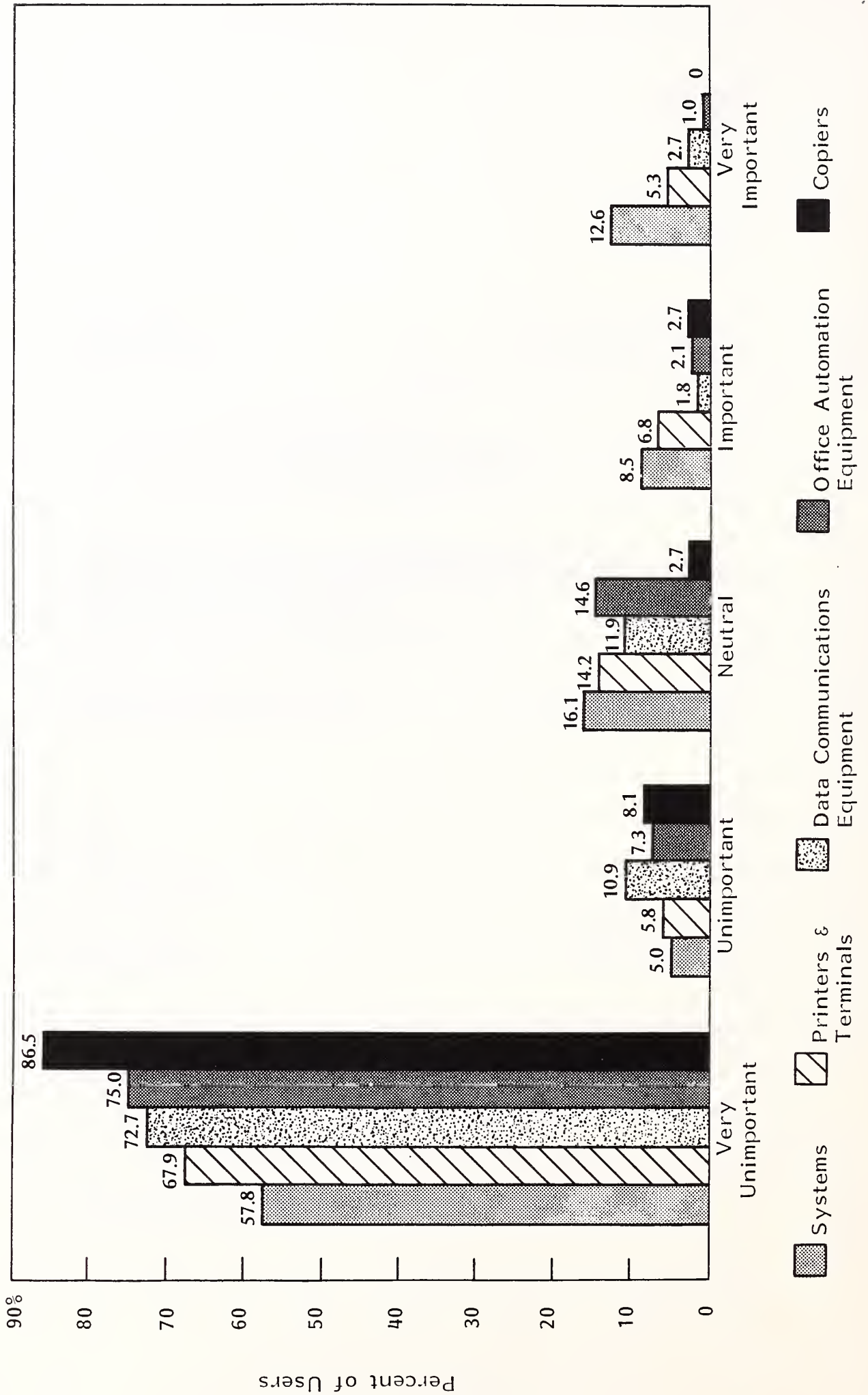
EXHIBIT IV-26

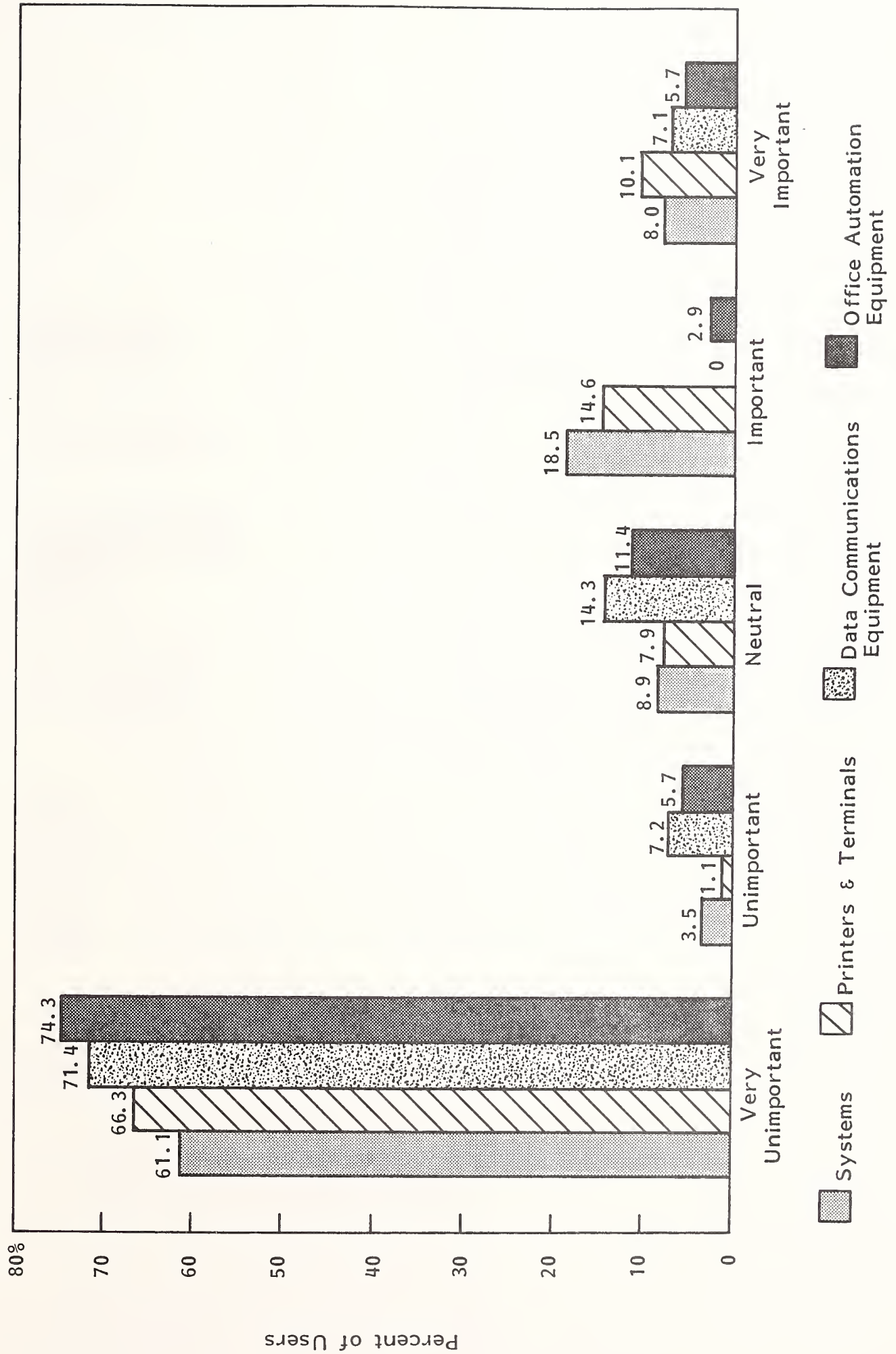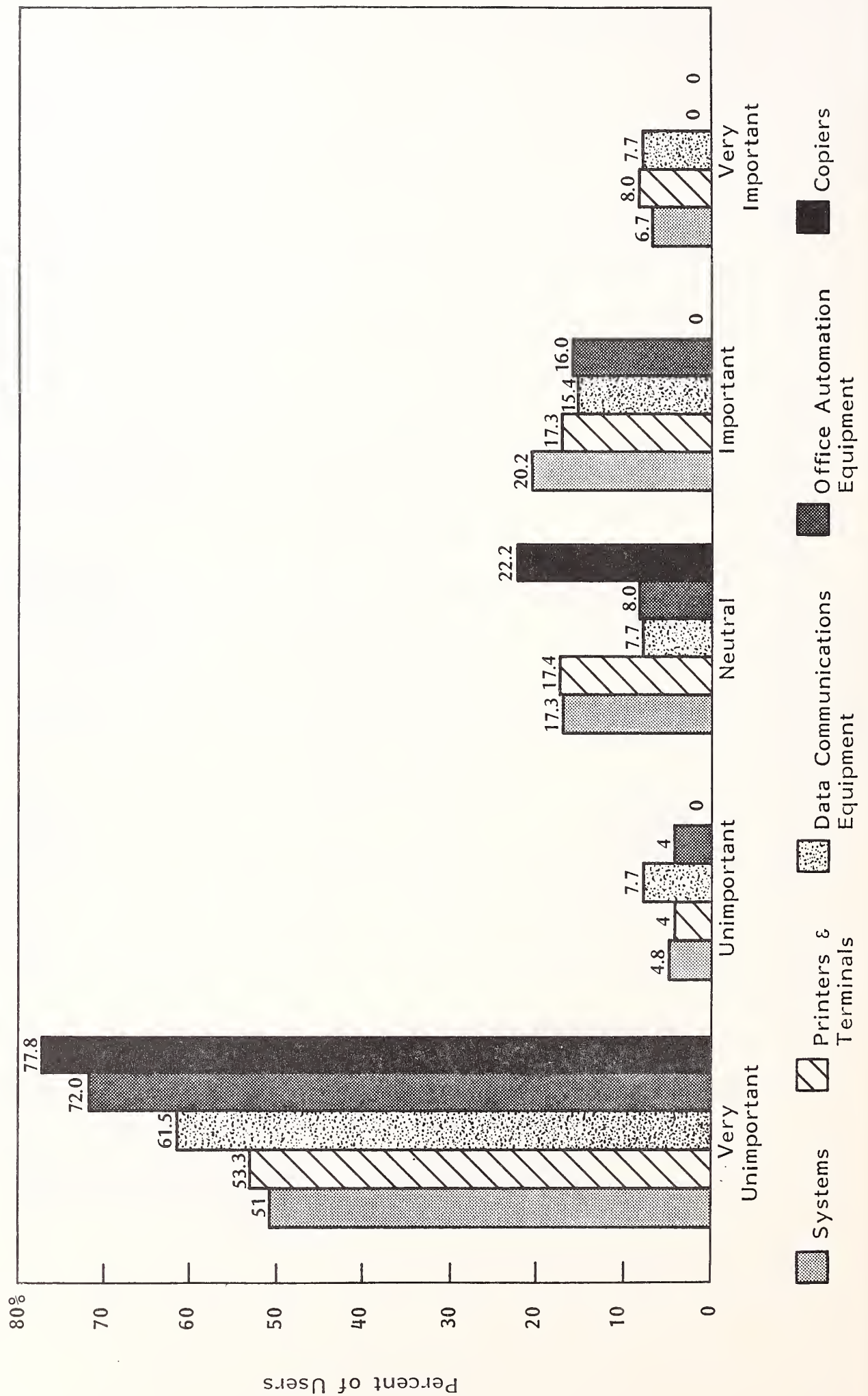IMPORTANCE OF AN ON-SITE ENGINEER - FRANCE
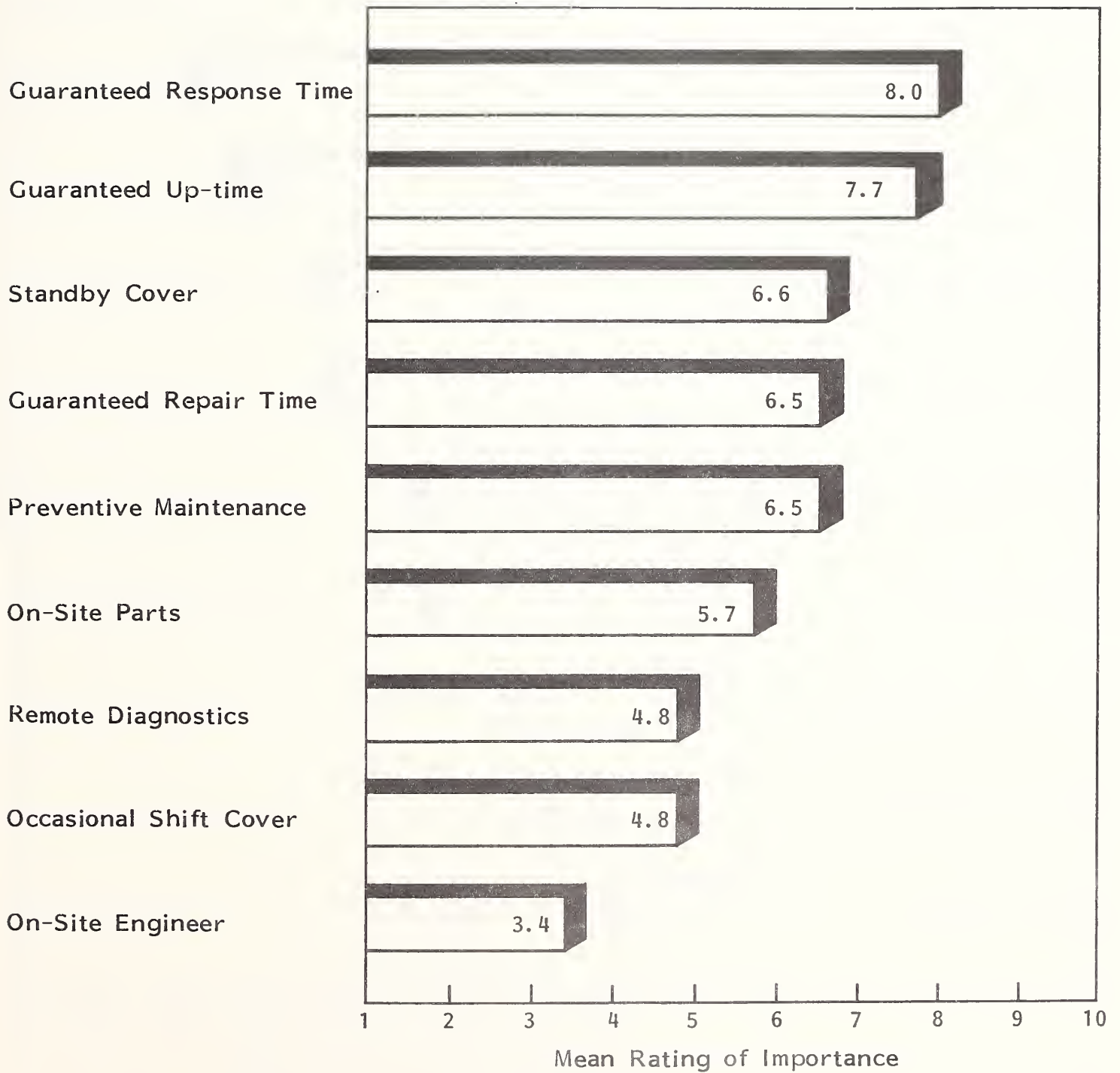
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EXHIBIT IV-27

IMPORTANCE OF AN ON-SITE ENGINEER - GERMANY

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APPENDIX A: IMPORTANCE OF SERVICE FACTORS
BY PRODUCT GROUP--
UNITED KINGDOM, FRANCE, AND GERMANY

IMPORTANCE TO USERS OF SERVICE FACTORS
UNITED KINGDOM: SYSTEMS

	Mean Rating of Importance
Guaranteed Response Time	8.0
Guaranteed Up-time	7.7
Standby Cover	6.6
Guaranteed Repair Time	6.5
Preventive Maintenance	6.5
On-Site Parts	5.7
Remote Diagnostics	4.8
Occasional Shift Cover	4.8
On-Site Engineer	3.4

Mean Rating of Importance

Rating: 1 = Unimportant, 10 = Very Important.

INPUT

IMPORTANCE TO USERS OF SERVICE FACTORS
UNITED KINGDOM: PERIPHERALS AND TERMINALS
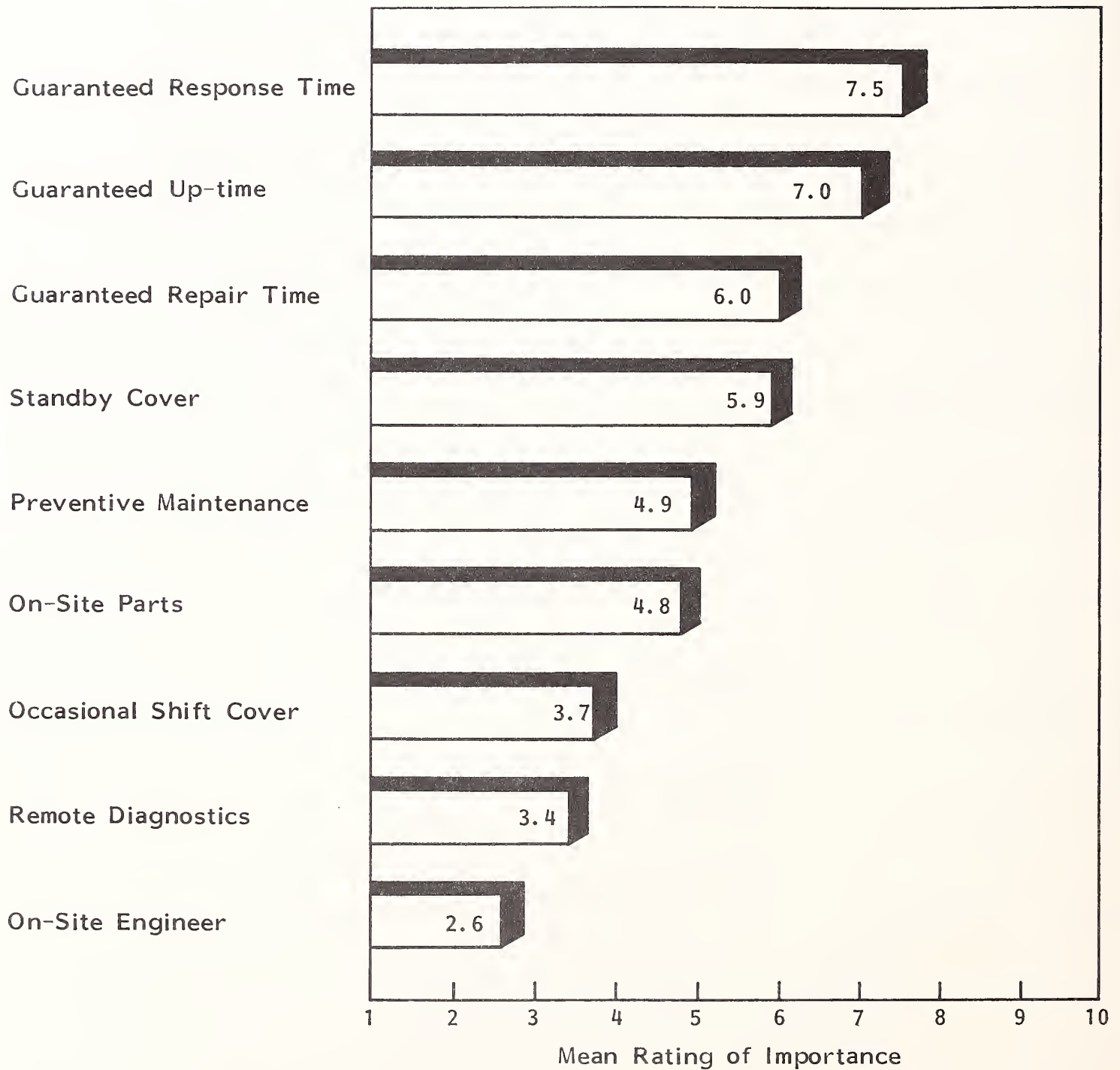
	Mean Rating of Importance
Guaranteed Response Time	7.5
Guaranteed Up-time	7.0
Guaranteed Repair Time	6.0
Standby Cover	5.9
Preventive Maintenance	4.9
On-Site Parts	4.8
Occasional Shift Cover	3.7
Remote Diagnostics	3.4
On-Site Engineer	2.6

Mean Rating of Importance

Rating: 1 = Unimportant, 10 = Very Important.

INPUT

IMPORTANCE TO USERS OF SERVICE FACTORS
UNITED KINGDOM: DATA COMMUNICATIONS EQUIPMENT
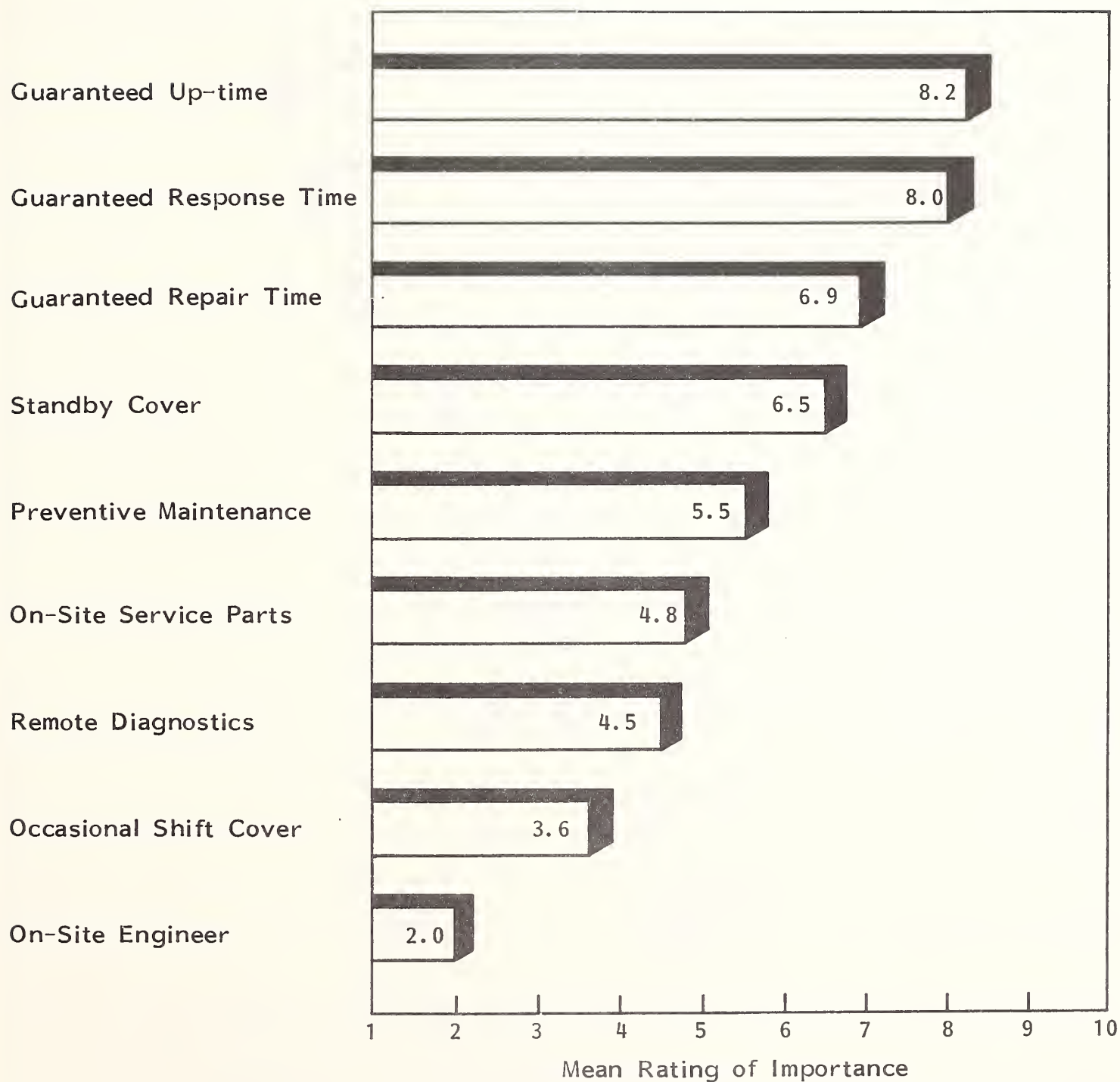
Service Factor	Mean Rating
Guaranteed Up-time	8.2
Guaranteed Response Time	8.0
Guaranteed Repair Time	6.9
Standby Cover	6.5
Preventive Maintenance	5.5
On-Site Service Parts	4.8
Remote Diagnostics	4.5
Occasional Shift Cover	3.6
On-Site Engineer	2.0

Mean Rating of Importance

Rating: 1 = Unimportant, 10 = Very Important.
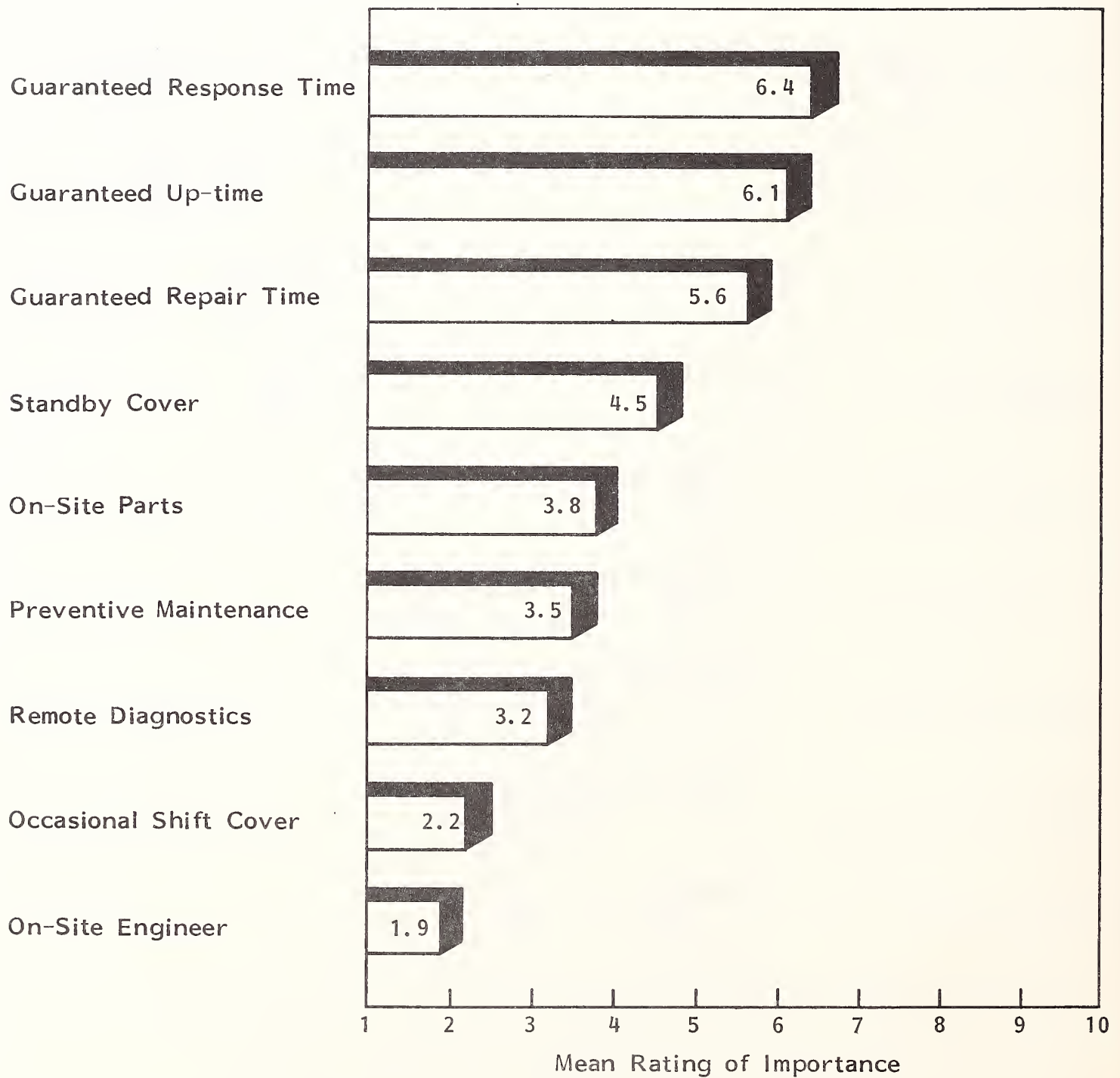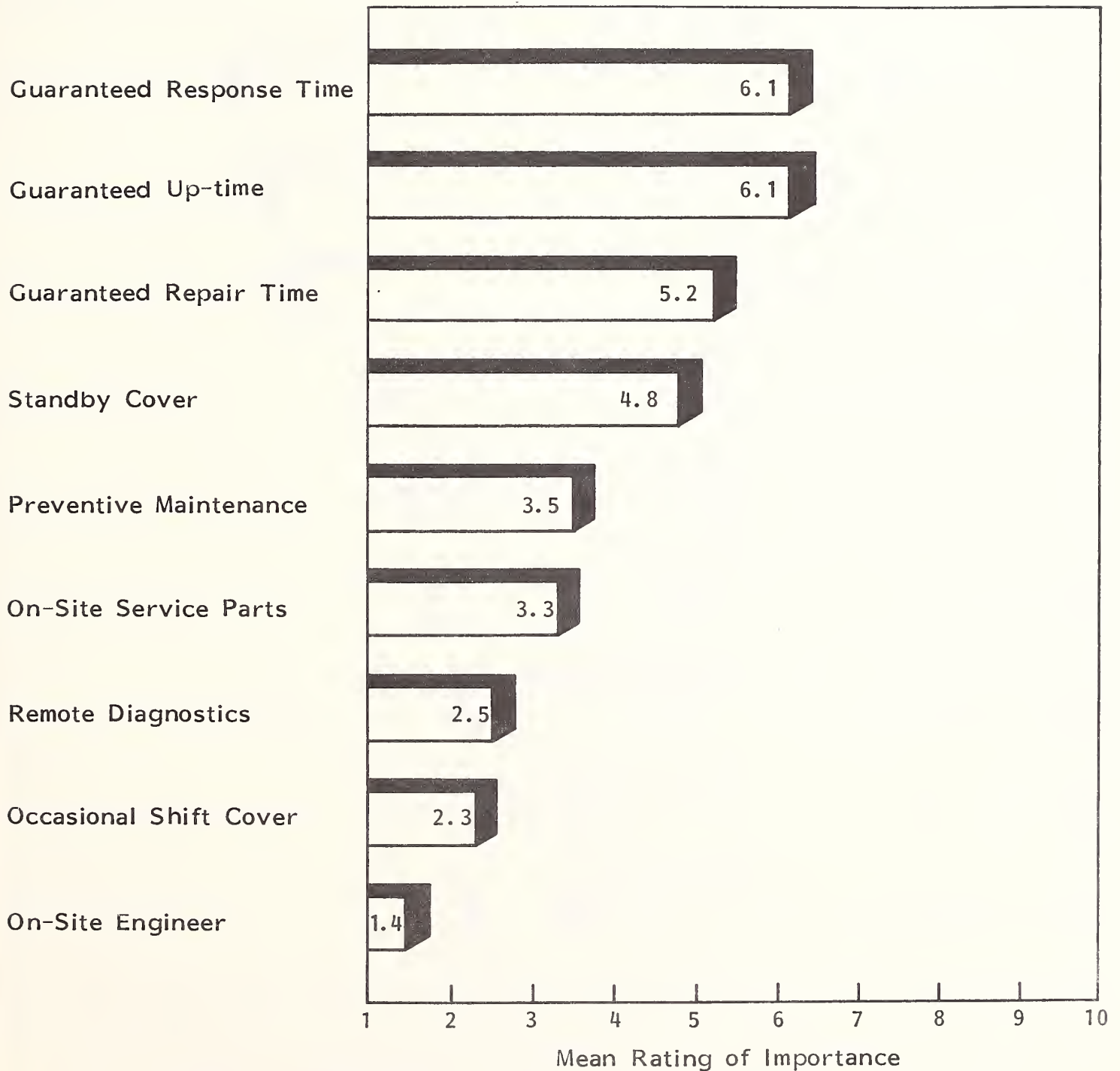
INPUT

IMPORTANCE TO USERS OF SERVICE FACTORS
UNITED KINGDOM: OFFICE AUTOMATION EQUIPMENT

Rating: 1 = Unimportant, 10 = Very Important.

INPUT

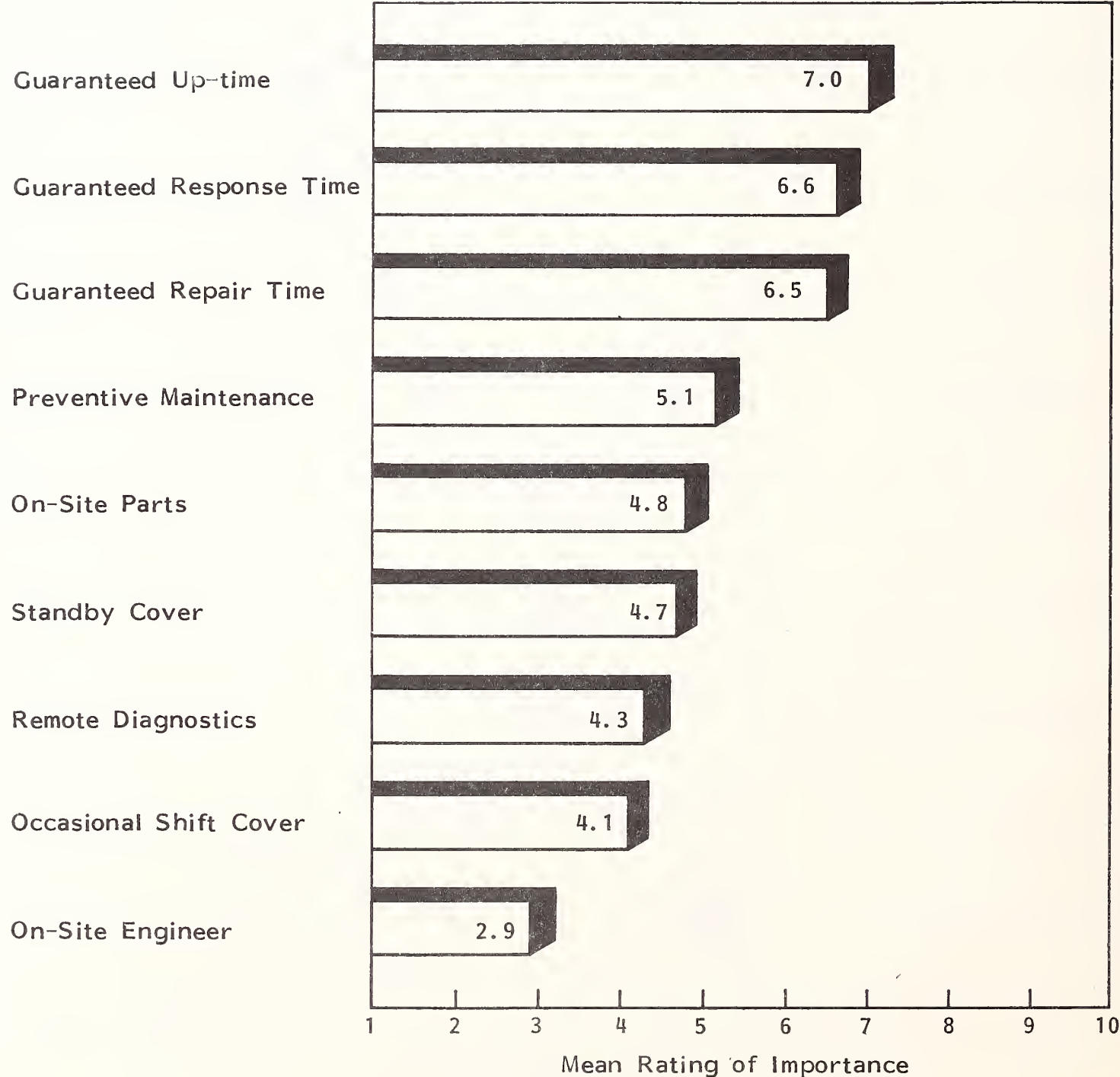## IMPORTANCE TO USERS OF SERVICE FACTORS
UNITED KINGDOM: COPIERS

Mean Rating of Importance

Rating: **1** = Unimportant, **10** = Very Important.

INPUT

IMPORTANCE TO USERS OF SERVICE FACTORS
FRANCE: SYSTEMS

Mean Rating of Importance

Rating: 1 = Unimportant, 10 = Very Important.

INPUT

EXHIBIT A-7

IMPORTANCE TO USERS OF SERVICE FACTORS
FRANCE: PERIPHERALS AND TERMINALS
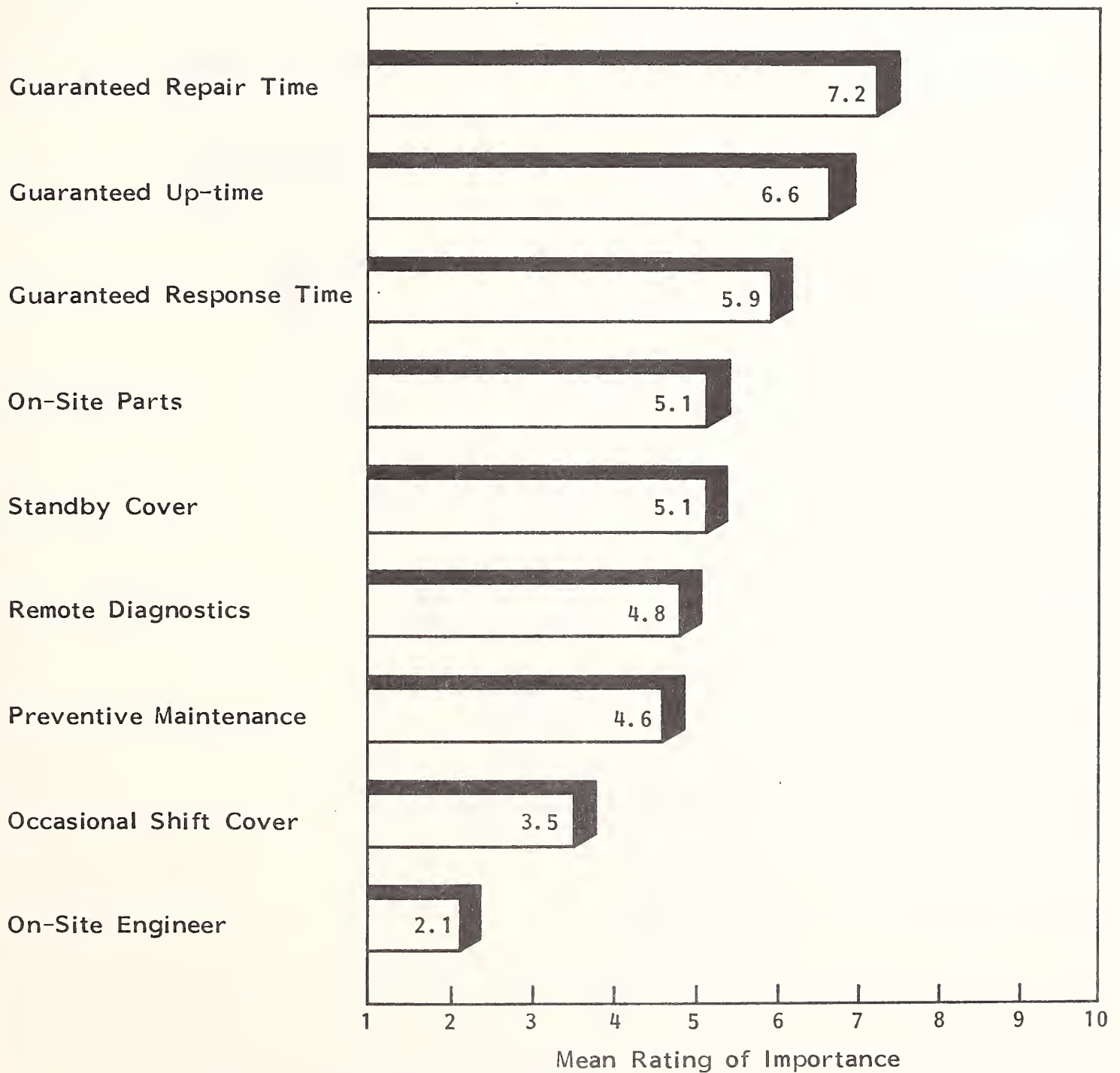
Service Factor	Mean Rating of Importance
Guaranteed Repair Time	7.2
Guaranteed Up-time	6.6
Guaranteed Response Time	5.9
On-Site Parts	5.1
Standby Cover	5.1
Remote Diagnostics	4.8
Preventive Maintenance	4.6
Occasional Shift Cover	3.5
On-Site Engineer	2.1

Mean Rating of Importance

Rating: 1 = Unimportant, 10 = Very Important.

INPUT

IMPORTANCE TO USERS OF SERVICE FACTORS
FRANCE: DATA COMMUNICATIONS EQUIPMENT
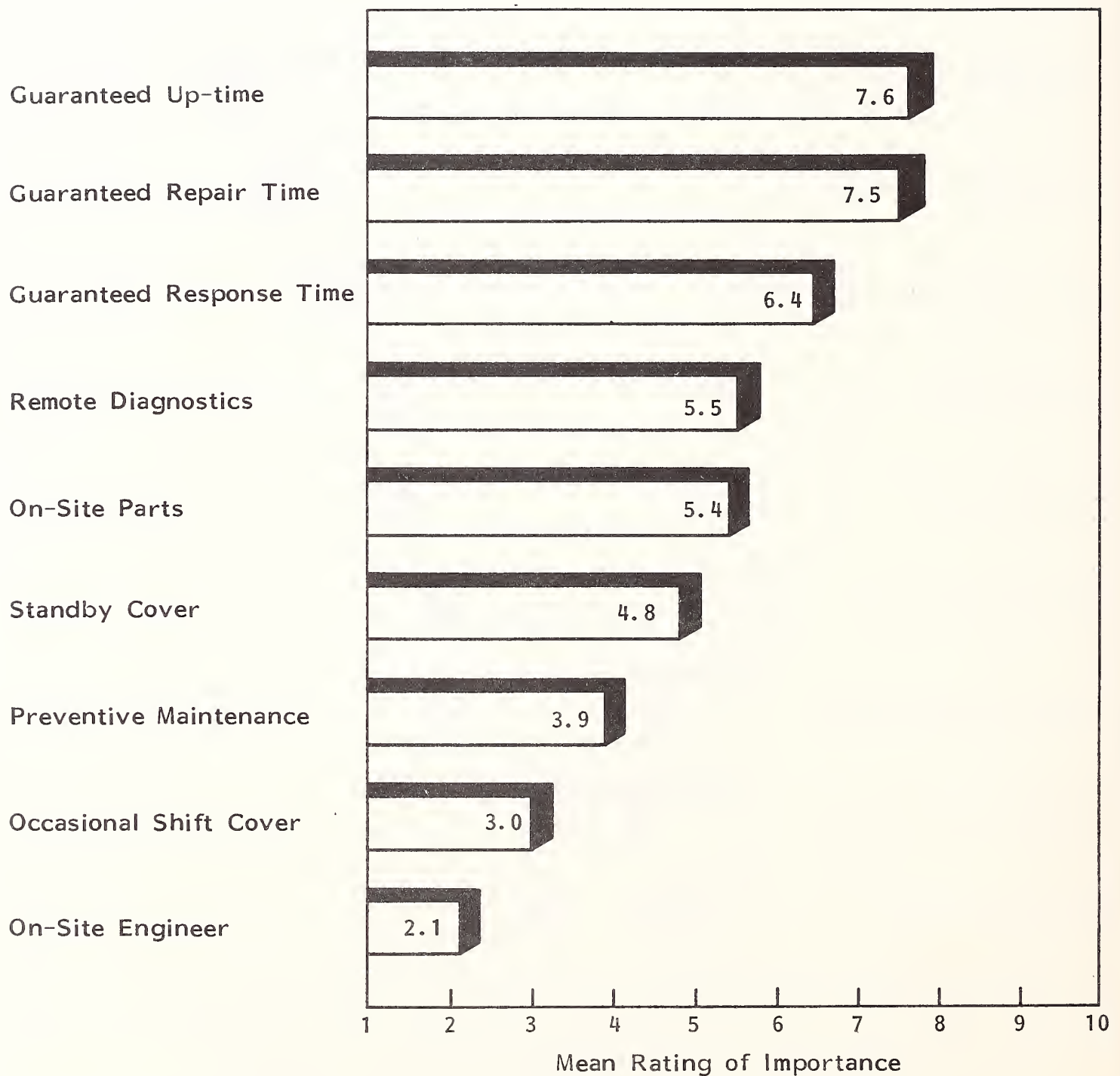
Service Factor	Mean Rating
Guaranteed Up-time	7.6
Guaranteed Repair Time	7.5
Guaranteed Response Time	6.4
Remote Diagnostics	5.5
On-Site Parts	5.4
Standby Cover	4.8
Preventive Maintenance	3.9
Occasional Shift Cover	3.0
On-Site Engineer	2.1

Mean Rating of Importance

Rating: 1 = Unimportant, 10 = Very Important.

INPUT

IMPORTANCE TO USERS OF SERVICE FACTORS
FRANCE - OFFICE AUTOMATION EQUIPMENT
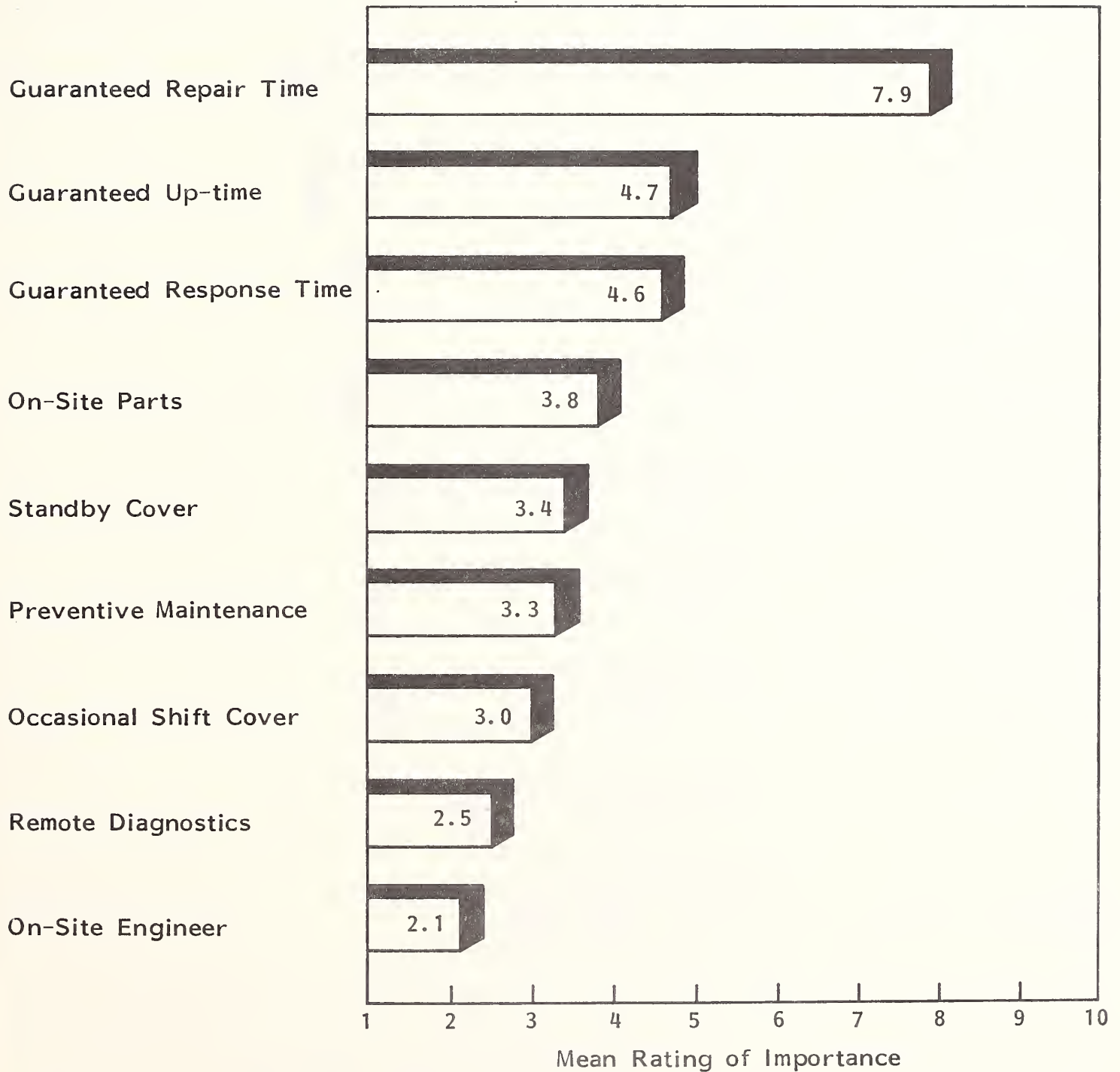
Mean Rating of Importance

Rating: 1 = Unimportant, 10 = Very Important.

INPUT

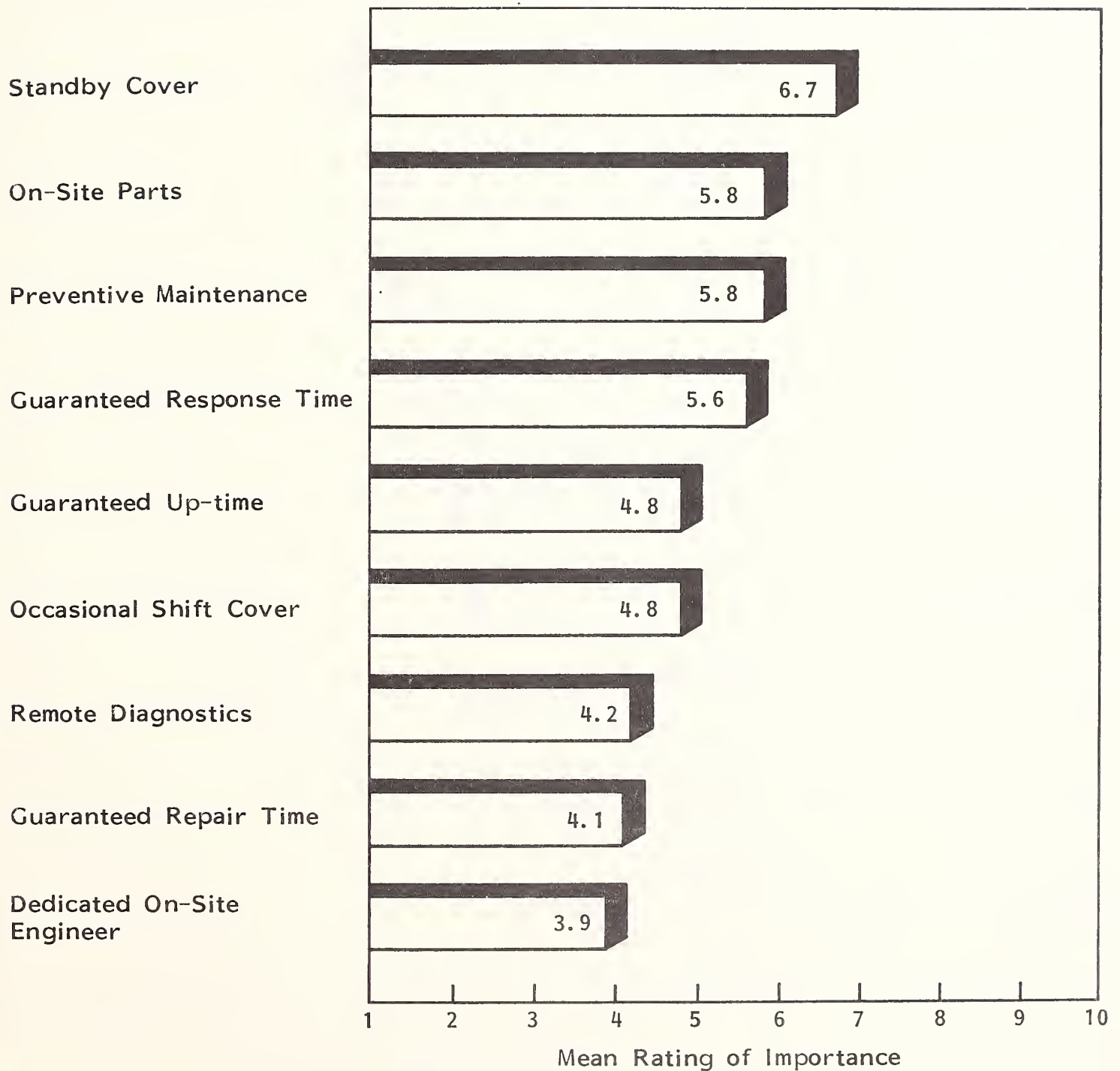## IMPORTANCE TO USERS OF SERVICE FACTORS
GERMANY: SYSTEMS
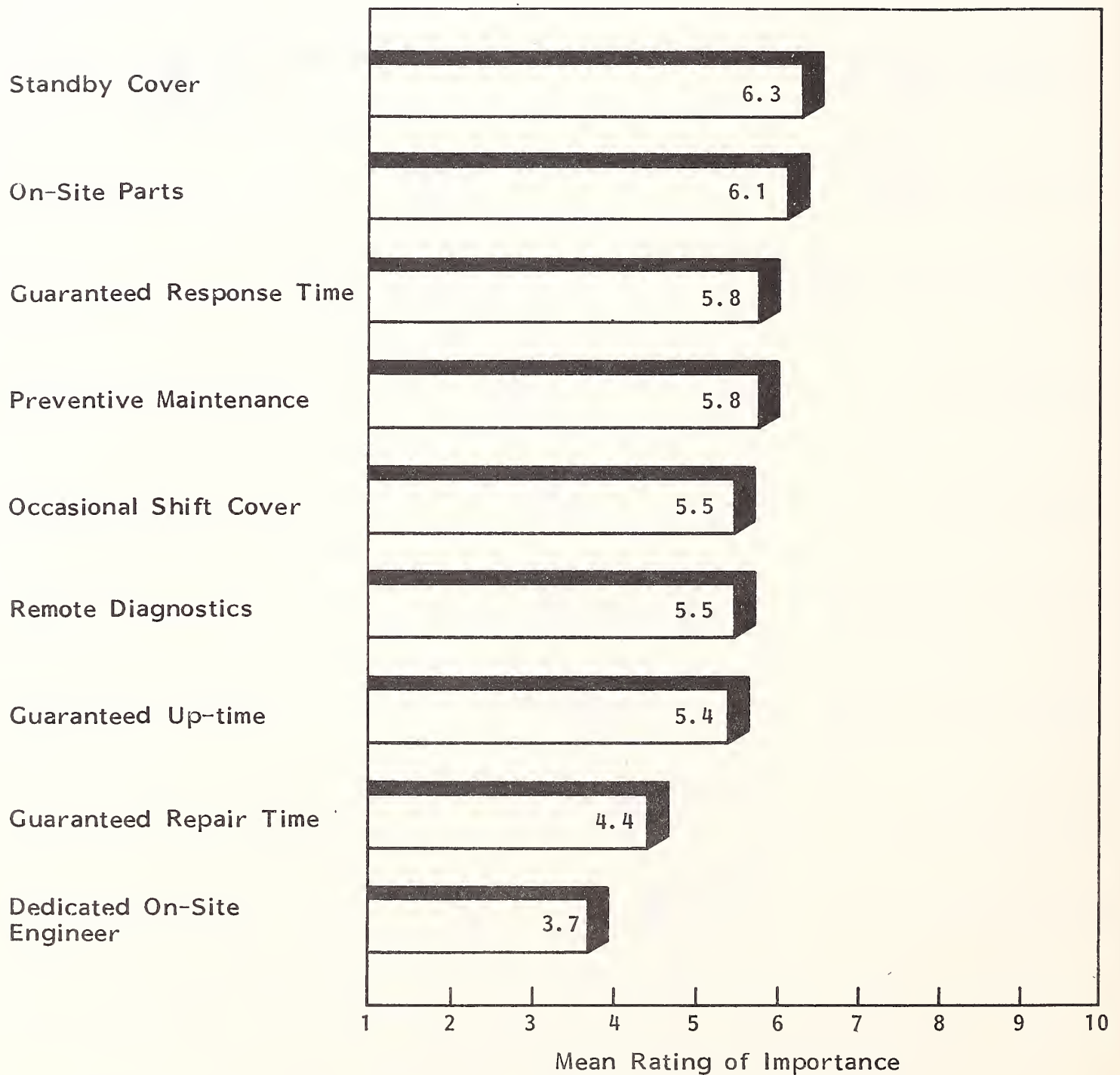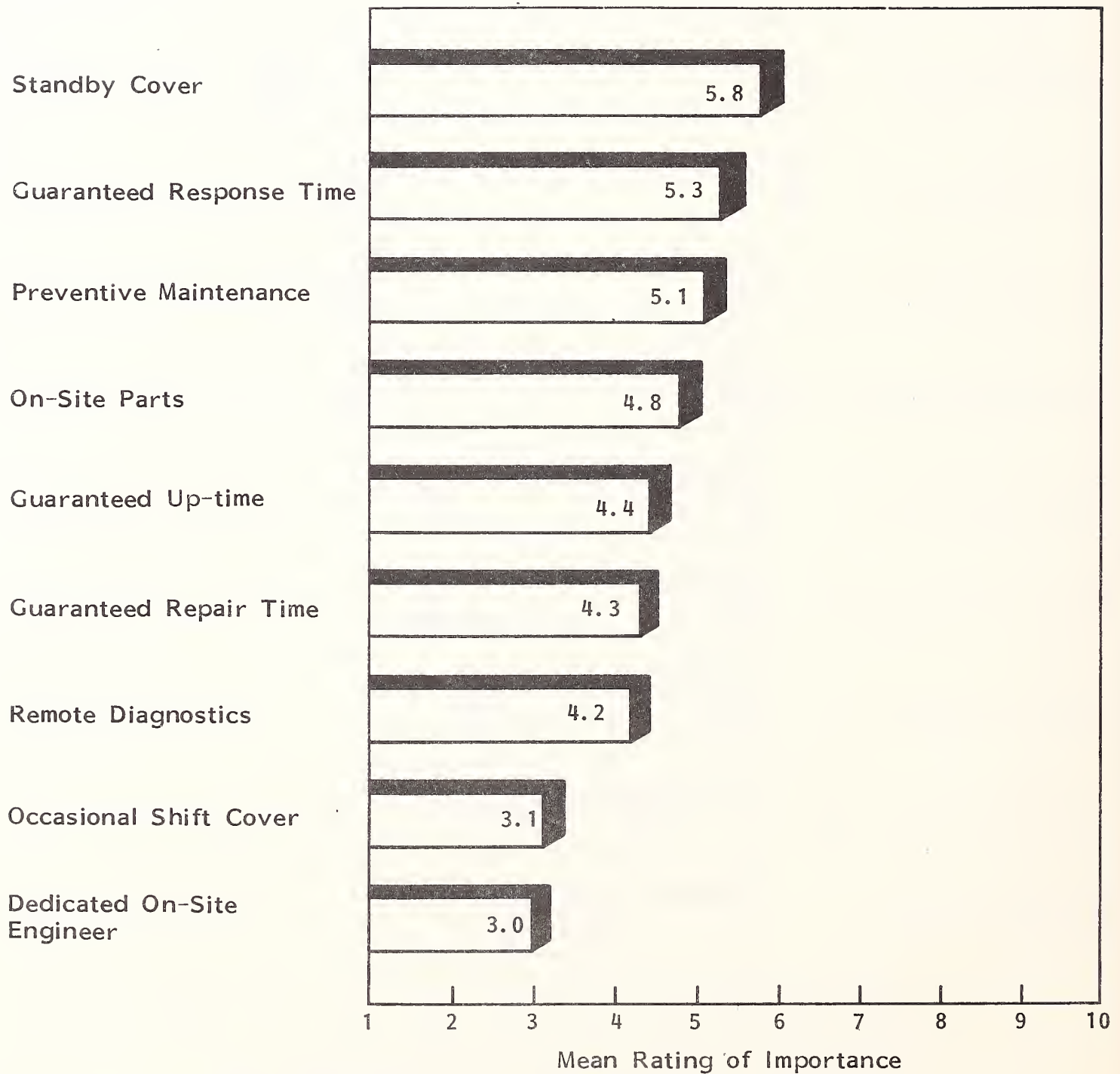

Rating: 1 = Unimportant, 10 = Very Important.

INPUT

IMPORTANCE TO USERS OF SERVICE FACTORS
GERMANY: PERIPHERALS AND TERMINALS

	Mean Rating of Importance
Standby Cover	6.7
On-Site Parts	5.8
Preventive Maintenance	5.8
Guaranteed Response Time	5.6
Guaranteed Up-time	4.8
Occasional Shift Cover	4.8
Remote Diagnostics	4.2
Guaranteed Repair Time	4.1
Dedicated On-Site Engineer	3.9

Mean Rating of Importance

Rating: 1 = Unimportant, 10 = Very Important.

INPUT

IMPORTANCE TO USERS OF SERVICE FACTORS
GERMANY: DATA COMMUNICATIONS EQUIPMENT

Mean Rating of Importance

Rating: 1 = Unimportant, 10 = Very Important.

INPUT

IMPORTANCE TO USERS OF SERVICE FACTORS
GERMANY: OFFICE AUTOMATION EQUIPMENT

	Mean Rating
Guaranteed Repair Time	4.9
On-Site Parts	4.9
Guaranteed Response Time	4.9
Preventive Maintenance	4.7
Standby Cover	4.7
Guaranteed Up-time	4.3
Occasional Shift Cover	3.7
Remote Diagnostics	3.4
On-Site Engineer	2.9

Mean Rating of Importance
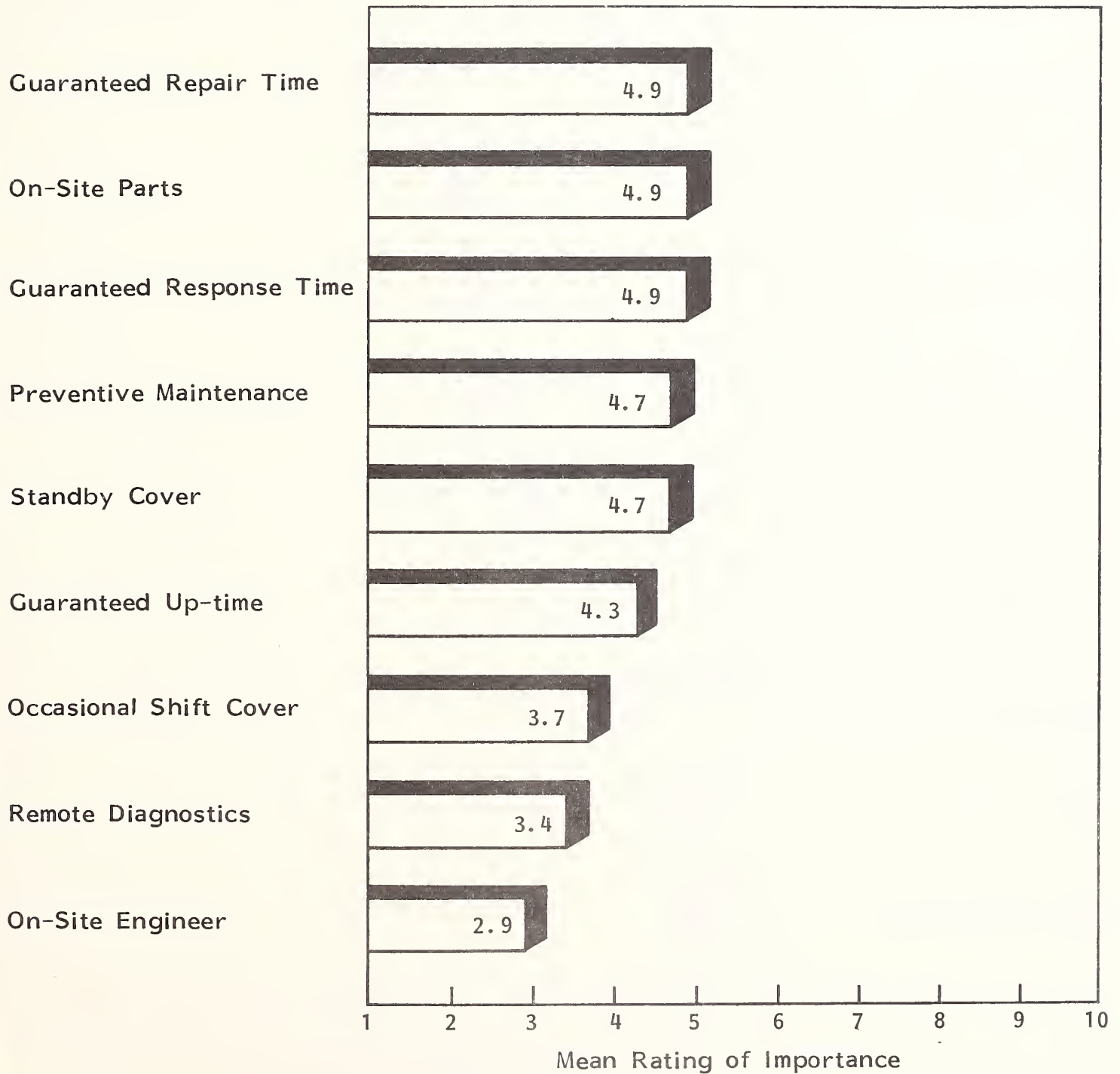
Rating: 1 = Unimportant, 10 = Very Important.

INPUT

EXHIBIT A-14

IMPORTANCE TO USERS OF SERVICE FACTORS
GERMANY: COPIERS

Mean Rating of Importance

Rating: 1 = Unimportant, 10 = Very Important.

INPUT